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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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PAPER TRADE JOURNAL
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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
FIFTY-SECOND YEAR
Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., INC.
LESLIE R PALMER, PRESIDENT — GEO. S MACDONALD, VICE-PRESIDENT & TREAS. — F. K. HOPPIE, SECRETARY
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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXVIII No. 18 NEW YORK AND CHICAGO Thursday, May 1, 1924

NEW CLOQUET MILL SUCCESSFULLY OPERATING

Northwest Paper Co. Now Running Its New Fifty-Ton Chemical Pulp Mill Unit Specially Designed for the Reduction of Wood of the Type of Jack Pine, Tamarack, Poplar and Birch to Pulp Which Can Be Readily Converted Into High Grade Papers—Destined to Make Cloquet Stand Out for Great Adventure in Conservation and Utilization.

[FROM OUR REGULAR CORRESPONDENT.]

CLOQUET, Minn., April 28, 1924.—The new plant of The Northwest Paper Company, after a year and a half of building operations completed last December, and following a thorough trial and demonstration of all the modern equipment installed, is now in successful commercial operation, manufacturing high grade bleached book paper and strong wrapping paper. This development came as a natural result following the desire of the directors of the company to bring about the utilization of woods other than spruce and balsam, which are native in Northern Minnesota, and in greater abundance than the species which have been used exclusively heretofore. The whole development ties in with the policy of giving the city of Cloquet a permanency not enjoyed by other towns dependent largely upon wood using plants for their industrial activities.

George F. Hardy Engineer in Charge

Early in the year 1921, work has started on this project by the employment of George F. Hardy, pulp and paper engineer, of New York, for the purpose of drawing up plans and specifications for the erection of a fifty-ton chemical pulp mill unit, which would reduce wood of the type of jack pine. tamarack, poplar and birch, to a pulp which could be readily converted into high grade papers. Previous to that time the operation of The Northwest Paper Company in Cloquet had been limited to the manufacture of news print paper on its two machines, and the production of groundwood, and of unbleached sulphite pulp, part of which was used in the production of news print paper, and the balance shipped to other mills in Minnesota and Wisconsin, for similar use. The company also operates a 45-ton news print mill at Brainerd, Minn., utilizing the groundwood produced there and surplus Cloquet sulphite.

The work of designing and the purchase of the larger units of machinery had reached a point in June, 1922, where the company was in a position to proceed with the erection of the plant; consequently, the contract for this work was let at that time, to Siems, Helmers & Schaffner, of St. Paul, who had previously done a great deal of work in this vicinity.

The site of the building chosen, was to the south and east of the earlier development, and the first two months of building operations, were occupied in excavation work on this site. The erection of the steel skeleton frame of the building proceeded and was followed by enclosure of the building with brick panel walls, and the construction of the floors, roofs, chests, and machinery foundations.

Building Completed in November

In the meantime, the company completed its purchase of machinery for the new plant, which was shipped from time to time, by pulp and paper machinery builders and installed upon arrival. The building work was practically all completed about November 1, 1923, and from that time until February 1, 1924, the completion of piping and electrical work ocupied the efforts of a large crew of men. On January 31, the first pulp was produced in this mill, but it was not until February 13 that an opportunity presented itself to manufacture this pulp into paper, the first product being an unbleached book paper similar to that used in the farm journals. Ever since that time, the efforts of the operating organization have been directed toward improvements in the operation of the intricate machinery, and in building up the quality of the product, and within the past week, the final result has reached the point where commercial products of the highest grade have been produced in a large quantity.

In connection with this vast work, it was necessary not only to build a new chemical pulp unit, but to thoroughly remodel the old paper mill, including the beating equipment, the paper machines, and the finishing department, and in addition, to build a large modern steam plant, which has been described in a previous issue, for the purpose of supplying the entire plant with steam for process work, and with electric power to augment the hydro-electric power already produced by the water power plant.

The old finishing room, a frame structure, built on a stone foundation in 1898, was therefore dismantled, and the machine room extended about 30 feet in length and a new finishing room added.

Another large development was the provision for a tremendous capacity of filtered water. This necessitated the building of a water screening plant and an installation of a sand filter in the basement of the new finishing room.

Other improvements made at the same time, were in the old hydro-electric plant, where new switch boards were installed insuring a high voltage connection between the steam and water electric plants.

The Building Program

The entire building program consisted first of the clearing of some 35 acres of land to be used for piling ground for the new wood yard. About three miles of track were laid in this wood yard which accommodates storage of 35,000 cords. An artificial log pond 150 feet in length and 10 feet in depth, adjoins the wood room which is 90 by 135 feet, two stories in height.

This building is connected by a conveyor bridge, 330 feet in length and 20 feet wide, with the pulp mill buildings which are 480 feet long, running in width from 60 to 120 feet. Among these buildings, the digester building is the highest, reaching a height of 70 feet and the rest of the buildings are two and three stories high.

This group does not include the chemical department which is 110 feet square, nor the boiler plant and turbine room 200 feet long and 60 feet wide.

Varied Steps in Making Sheet of Paper

A brief description of the process will give the reader an oppor-

tunity to fully appreciate the many varied steps which are necessary in the manufacture of such a simple thing as a sheet of paper.

The first step is in the handling of pulpwood which is received from logging operations on cars. These cars are unloaded by large Browning Locomotive Cranes, using a pulpwood grab bucket which transfers a load of approximately one-half cord per load from the car to the pile. In this way a tremendous amount of physical work is eliminated and a pile as high as 30 feet is possible.

When this wood is brought to the mill, it is re-loaded on cars in the same manner and again unloaded into the artificial hot pond. From here the wood is poled to the Ryther & Pringle Slasher Chain, which carries a continuous stream of logs to the saws, which cut it into two or four foot lengths.

At the end of the Slasher Chain the wood drops into a revolving Manitowoc Drum, 21 feet in diameter and 45 feet long, where the tumbling of the blocks of wood removes the bark which drops through the slots of the drum and is carried away for use in filling the uneven topography of the wood yard.

The continual loading of the drum forces the blocks from out of the further end of the drum on a conveyor chain, which carries them to the Carthage Chipper. Some of the blocks which come out with bark still adhering, are transferred to a return conveyor, which either delivers the wood to the feeding end of the drum or to Green Bay Knife Barkers which take the remaining bark off and return the peeled blocks to the chipper.

Handling the Chips

The chips from this machine are automatically screened and the rejections are rechipped, and the sawdust joins the refuse from the knife barkers and the saw mill refuse on a Caldwell Belt Conveyor, which carries it over the long bridge to the boiler plant, where it is used as fuel to augment the coal.

The screened chips also travel over the bridge on a rubber belt conveyor to the chip bin, situated in the top of the digester house, with sufficient storage capacity for two or three days' operation.

Directly below this large bin, which is separated in compartments for the various kinds of wood, are situated 4 Kellogg Digesters 10 feet in diameter and 30 feet high. The chips are dropped into the digesters, the chemical solution pumped in and live steam under 160 lbs. pressure turned on. This constitutes the cooking operation which lasts from 5 to 9 hours depending upon the particular kind of wood used.

At the End of Cooking Operation

At the end of the cooking operation, the pulp is blown into a Bros Steel Blow Tank and dropped from there into a drainer chest where the spent solution containing the dissolved gum and rosins runs off from the pulp to a certain extent. It is necessary, however, to press all of this material out of the pulp, and, consequently, the pulp is pumped to an Oliver Continuous Filter, which presses all of this "black liquor" out of the pulp and introduces fresh water. From this point on, the process divides into two parts; one, the treating of the pulp for paper making, and the treating of the black liquor to recover a large portion of the chemicals for further use.

In the latter process this "black liquor" is first pumped to Badger Evaporators, which are steel chambers containing a large number of steam coils for low pressure steam which is received from the turbines, and from the waste heat boilers.

The spraying of the "black liquor" on these coils reduces its consistency from a thin liquid into a thicker substance which is then pumped to the Manitowoc Rotary Incinerators. These incinerators are fitted with a Ray Oil Blast Furnace, producing a flame which evaporates the remaining amount of moisture in the black liquor as it rolls in the rotating incinerator. As soon as the moisture is driven off, the black liquor ignites and the gum and rosins of the wood which it contains, are consumed by the flames, and the original chemicals which are non-combustible, are delivered at the further end of the incinerator in the form of a black ash. This black ash is then conveyed to Bros Leeching Tanks where the particles of carbon drop down, leaving a residue of recovered Soda Ash which is combined with a certain proportion of fresh soda ash to make up the supply of chemical solution for cooking purposes.

The Filtered Pulp

To return to the filtered pulp, this material is then pumped through a screen which removes the knots and slivers. In order to screen properly, the pulp has been thinned out to the point where there is only one part of stock in 300 parts of water. Therefore,

NEW CHEMICAL PULP UNIT AND STEAM PLANT OF NORTHWEST PAPER COMPANY, CLOQUET, MINN.

the next step is to reduce this to the point where there are only five parts of water to one part of stock. After extracting this tremendous amount of water on an Oliver Filter, the pulp is in the form of a wet sheet and drops through a Rice, Barton & Fales Shredder, which breaks it up into small particles and distributes these particles to the Wolf Bleaching Tanks.

In the bleaching tanks the stock is continually agitated for four or five hours, and is under treatment with a chemical solution containing chlorine and lime. Previous to the bleaching, the pulp has a light brown color and after bleaching, the color runs from a cream to a pure white depending on the amount of bleaching done.

The bleached stock is then dropped to a drainer chest where the bleaching solution runs away and fresh water is admitted, and from there the stock is pumped to either a Union Iron Works Wet Machine, producing bleached pulp in laps about 40 per cent dry, or to an Improved Decker, which produces the pulp in slush form.

Some of the pulp is produced in unbleached form and in this case, it is only necessary to thicken the screened stock and then pulp to either the wet machine or deckers.

The pulp mill operation is now complete and the stock goes over to the beater room either in slush form by Hayton Triplex Pumps, or in lap form by trucking.

In the Beater Room

The Niagara Beaters are then filled with a slush pulp to which is added sufficient lap stock to make the proper consistency and the other paper making materials added. Following that the pulp is pumped through Jordan Refining Engines, and from there the pulp is pumped to the paper machine.

The Machine Room

The Machine Room equipment consists of two 120 inch Beloit Fourdriniers which have been thoroughly remodeled to produce high grade papers, and are driven by Chandler & Taylor variable speed engines.

The bulk of the bleached papers are cut into sheets on a Moore & White Cutter, while the wrapping product goes to a Cameron Rewinder. A Holyoke Supercalender and a Seybold Ream Cutter completes the Finishing equipment.

Varieties of Paper Now Made

The entire mill is so divided that the production of both long and short fibered pulp can be conducted at the same time. The greater part of the pulp for book paper is bleached; whereas, the larger portion of the wrapping stock is unbleached. In addition to the manufacture of the two standard grades, book and wrapping paper, The Northwest Paper Company, on account of its large sulphite mill and groundwood mill, which formerly produced the major portion of the pulp used in news print, is also in a position to manufacture a great many varieties of paper besides these standard grades, and it may be that during certain seasons of the year large quantities of news print, butchers, wrapping paper, envelope paper, and the cheaper grades of writing paper may be produced.

Novel Features

There are several novel features both in the mill and the products which are worthy of note. In the two standard grades, the book paper made by this new process, besides showing all the desirable printing qualities of the high grade bleached book paper, shows a breaking strength far superior to that of the ordinary book paper on the market. This makes it a very desirable product for use in magazine, poster and label printing, which must withstand considerable wear and tear.

A novel feature of the strong wrapping paper is the light natural color, which will enable the company to produce light colors much more pleasing to the eye and better suited for incidental printing than the present kraft paper which is so universally used. This is done without sacrificing any of the strength of the paper.

There is a great deal of machinery in this plant of a design not heretofore used in pulp and paper mills, and which has been installed both for economy in operation and production of superior products.

Great Adventure in Conservation

The whole development is one which cannot help but bring a great deal of attention to the city of Cloquet, and the company intends to work this idea to the limit by the use of distinctive labels which will carry the name of Cloquet to a broad market, and will interest thousands of people in the central part of the United States, in the efforts which are being made to make Cloquet stand for a great adventure in conservation and utilization.

"Save the Forest Week" in Canada

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 28, 1924.—The present week is being observed as a "Save the Forest Week" in Canada, a Royal proclamation to this effect having been issued by the Governor-General on behalf of the Government. The Government has instituted a series of competitions through newspapers throughout the Dominion and is devoting $5,000 to prizes for children under sixteen who submit the best essays on "Ways and Means of Saving Canada's Forests." It is considered by the Government that interesting the children in the subject is the best way to get interest in the homes of the people. Frank J. D. Barnjum, who is advocating an embargo on all pulpwood in Canada, characterizes the efforts of the Government as peurile, childish and inefficient, and says that by the time the Government gets the children educated in the necessity of forest protection there will be no forests to protect. Meanwhile, an ardent opponent of Mr. Barnjum's campaign, namely, Ralph P. Bell, challenges Mr. Barnjum's offer to prove before an unbiased committee selected by the heads of the three largest banks in Canada that under present conditions Canada's entire available pulpwood supply will be exhausted within less than ten years. Mr. Bell suggests that if Mr. Barnjum wants a commission of his own, because he feels it beneath his dignity to appear before a Royal Commission appointed by the Government, he should pay the expenses of this special commission, say $25,000, and that Mr. Barnjum should in advance provide a satisfactory guarantee that the board he suggests should be paid their honorarium and expenses.

Ailanthus an Excellent Pulpwood

[FROM OUR REGULAR CORRESPONDENT.]

MADISON, Wis., April 28, 1924.—Wood from the ailanthus, otherwise known as the tree of heaven, which was imported from China into Pennsylvania and New York and is rapidly becoming a weed and a menace in those states, has been discovered by the U. S. Forest Products Laboratory here to be an excellent pulpwood. A half cord of ailanthus wood, sent by the Pennsylvania state department of forestry to the laboratory with the hope of finding some use for it, was made on the experimental paper machine into a good grade of book paper.

The wood, which is pulped by the soda process, gives a high yield of pulp. Since it bleaches very easily, the product can be used in the manufacture of book, lithograph, and writing paper.

The growth of the ailanthus tree is rapid. In New Zealand the ailanthus is said to produce twenty-five tons of wood to the acre every three years.

To Discuss Boxboard Conditions

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 28, 1924.—Secretary Davis of the Department of Labor has called a general meeting of the boxboard industry for May 2 in assembly hall of the Department of Interior Building, Washington, for discussion of labor conditions. The Boxboard associations will be represented at the meeting.

WATERTOWN MILL EMPLOYEES DISCUSSING MAY AGREEMENT

Mill Officials Declare Men Must Continue to Work After May 1 Without an Agreement or Quit Their Work—New Hydro-Electric Development Being Constructed at High Falls on The Beaver River—Chamber of Commerce Gathers Statistics on Suburban Paper Production—Paper Industry Pays Last Respects to Memory of C. C. Burns, Late General Manager of St. Regis Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., April 29, 1924.—Members of the local union employed in the mills of the St. Regis Paper Company and the Hanna Paper Corporation held meetings in their respective mills Sunday for the purpose of discussing the proposition by officials of the two companies affecting the May 1 agreement.

All the meetings were held behind closed doors. The members of the locals refused to discuss the results of the meetings or to announce the result of the votes taken on the proposition.

The officials of the paper companies have received no notice of the acceptance or the refusal of their terms. The company officials are to meet with the unions.

Representatives of the international union were present at the meetings but also refused to divulge any information. It is understood however that members of the locals are divided on the various questions.

The St. Regis officials are willing to recognize the local unions but refuse to have any negotiations with the heads of the international union at Albany. This one point in their proposition is understood to be the point upon which the locals are divided. Rumors to the effect that the local companies have been storing large quantities of paper were denied by the companies as false. The St. Regis Company has not been storing paper and the Hanna Mills have stored a small quantity due to the fact there is a lack of orders on hand. In order to keep the mill running and give employment to the men it has been necessary to store some of the paper.

The employees of the two companies must either agree to the proposition which has been presented, continue to work after May 1 without an agreement or quit their work. This ultimatum has been delivered to the local unions by the paper mill officials.

The manufacturers do not care to deal with officials of the international union who might not be eligible to office until the court renders its decision in the Carey case it was said here.

Officials of the two companies do not expecte any disagreement with their men. Their attitude is for a quick settlement. Floyd Carlisle who in the past has been spokesman for paper manufacturers this year only dealt with the men of the St. Regis and Hanna Paper Companies. The other companies will be forced to settle with their own men.

Hydro-electric Development

A new hydro-electric development, capable of generating 10,000 horse power, is being constructed at High Falls on the Beaver River, according to an announcement made by Harry S. Lewis, president of the Beaver River Power Corporation.

Work on this development will include the construction of a 45 or 50 foot dam at the head of the falls and rapids and a power house containing four units, capable of developing 2,500 horse power each.

The construction of the dam will back the water up in the valley for a distance of about two and one-half miles almost to the tail race of the Belfort plant of the Northern New York Utilities Inc. The tail race from the new plant will empty into the backwater from the Croghan dam.

There will be a penstock of about 600 feet in length from the intake to the power house but the question of a surge tank has not been definitely decided by the company.

The High Falls project, which has long been looked upon as containing excellent possibilities, was purchased by the company from the estate of the late Theodore Basseling, prominent lumberman of Croghan.

With the regulation of the Beaver river through the completion of the Stillwater reservoir next year, the plant will receive an annual second flow of about 400 cubic feet.

According to the announcement by Mr. Lewis, the plant will be tied in with the Northern New York Utilities plants on the Beaver river.

With the completion of this project and that of the Soft Maple dam, which the Utilities Company is about to develop, there will be but one undeveloped power on the Beaver river, namely the Mosher Creek project, which is owned by Clarence L. Fisher. This site, according to the figures compiled by the conservation commission would have a head of 193 feet and would be capable of developing 6,200 horse power for 24 hour service.

This project lies between Eagle Falls and the Stillwater reservoir. In the distance of less than 35 miles between Stillwater reservoir and the mouth of the Beaver river there is a drop of nearly 1,000 feet.

Respect Memory of Mr. Burns

The mills and office of the St. Regis Paper Company and the offices of the Northern New York Utilities Company were closed Thursday during the funeral hours of C. C. Burns, late general manager of the St. Regis Paper Company and prominently identified at one time with the Utilities Company, serving as its president.

Work of construction at the Flat Rock power job was suspended Thursday out of respect to Mr. Burns, who at one time was part owner of the Burns Brothers and Haley Construction Company, which has charge of the Flat Rock and Effley Falls jobs.

Big Extension to B. C. Mills

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 28, 1924.—According to a dispatch from Vancouver, Norman Lang, managing director of the Powell River Pulp and Paper Company, states that demands upon the plant of the company have increased so rapidly during the past year or so that the company has decided upon an extension program which will mean an expenditure of between $5,000,000 and $6,000,000. The initial work will consist of the raising of the height of the Powell River dam at the falls which in itself will cost $600,000. The contract for this work has been let and work is to be proceeded with at once. Provision is also being made for increased wharfage space. As these works near completion contracts will be awarded for the other units of the development scheme. The operations in connection with the construction of additional plant room and installation of new mill machinery will require considerable dock room and as a result this work will be proceeded with immediately. These undertakings will be completed within a period of eight months. The company is also planning other betterments. Large sums are being spent in town improvements. Forty homes have been built recently and there are 112 families on the waiting list for homes. It is the intention of the company to meet these housing requirements as rapidly as possible.

Takes Over Richardson-Case Co.

SACRAMENTO, Cal., April 28, 1924.—The paper house of Blake, Moffit & Towne, with distributing headquarters in San Francisco and Los Angeles, has taken over the business of the Richardson-Case Paper Company of this city and will make Sacramento its third distributing headquarters. F. W. Benson, representative of the firm in the Sacramento Valley for several years, will be manager of the new division.

MATHIESON System

An Existing Bleach Plant

Readily Adapted to the Use of Liquid Chlorine

THE accompanying drawing illustrates how the existing bleach plant of the Crystal Tissue Company, Middletown, Ohio, was easily converted to the use of Liquid Chlorine by the Mathieson System. Necessary additional equipment consisted only of the chlorine connections and supply line and the lead expansion coil installed in one tank.

The two former bleach-mixing tanks now operate as a single unit, the combined capacity being sufficient to take the full contents of a ton container of Liquid Chlorine. The Liquid Chlorine enters the upper end of the lead coil through an expansion valve, vaporizes in the coil and is discharged as a gas into the suction of the pump, where it is absorbed by the circulating milk of lime solution. The temperature of the liquor is kept within safe limits by the refrigerative effect of the Liquid Chlorine vaporizing in the immersed coil.

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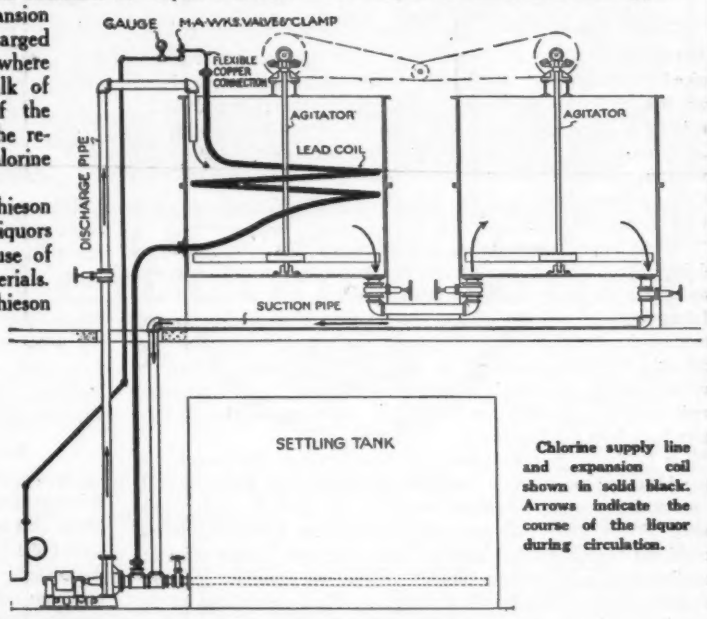

Chlorine supply line and expansion coil shown in solid black. Arrows indicate the course of the liquor during circulation.

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Liquid Chlorine-Caustic Soda

EAGLE THISTLE PRODUCTS

Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

FINE PAPER IN CHICAGO SOMEWHAT MORE STEADY

Improvement Especially Noticeable in Book Paper Market Where Numerous Inquiries in Past Few Weeks Have Developed into Orders at Prevailing Prices—Demand for Coarse Papers Continues Unsatisfactory and Some Slight Downward Revisions in Prices Are Reported—Geo. K. Gibson, Manager of Chicago Office of Wausau Sulphate Fibre Co., Gives Hopeful View of Wrapping Market.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, April 28, 1924.—Paper commodities generally are no more active than last week. Houses here handling fine papers report some increased steadiness in demand, which, however, is slight. Writings, bonds and ledgers, which last week presented a spotty market, register a little improvement, but they are not expected to go much stronger in the near future, in view of the fact that the usual summer slackness is just about due. Rather, a tapering off is anticipated.

A stronger tone pervades the book paper market. Numerous inquiries in the last fortnight have developed into definite orders at prevailing prices. Merchants are not stocking up on coated papers, except as necessary. Buying takes this cautious turn just at this period because houses catering to this territory steer clear of going through the warm months with a full warehouse.

Coarse Prices Down But Firmer Condition Expected

Some slight downward revisions in prices on coarse papers is noticed here this week. There is no improvement in demand. However, this does not sound so gloomy, inasmuch as the real sellers are keeping busy. And the outlook is better according to George K. Gibson, of the Chicago office of the Wausau Sulphate Fibre Company, makers of Mosinee Kra't, who gives this complete size-up of the coarse branch of the industry to a representative of THE PAPER TRADE JOURNAL:

"The wrapping paper market is firm with every indication of its holding firm. This is due principally to the fact that the foreign pulp market is now firming up and there has been an advance of sulphate pulp of $2 a ton. The foreign pulp situation has largely governed the American wrapping paper market. The Scandinavians have sold immense quantities of pulp in this country during the last five months at prices considerably under the cost of manufactured product here, with the result that American pulp mills generally have been closing down.

"Due to the large sales which the Scandinavians have made and the evident improvement in European conditions, the Swedish mills in particular are less disposed to make any further sales to the United States mills and consumers, except at advancing prices. Should the foreign market keep on improving and Europe offer the Scandinavians more money than is offered by American consumers, they will undoubtedly fill the higher priced orders and let the low-priced tonnage wait.

A Cheery Outlook Ahead

"The situation is one that will unquestionably make for an increasingly firm market and in this country particularly, when it is borne in mind that stocks of wrapping paper in the hands of consumers never were so low before and that stocks in the hands of jobbers, merchants and converters are also at low ebb. The greatest menace confronting the market is that the entire paper trade is on one side—they are all bears. Any improvement in conditions will serve to throw them on the other side with some probably increases in price as a result. We have been going through an era of investigations and rumors and as is generally the case, the rumors have exaggerated the commercial situation. This country is sound, money is cheap and credit plentiful. Labor is generally and generously employed at high wages and the purchasing power of the dollar is rapidly rising. Consumers have been extra cautious. They have been buying from hand to mouth and up to a month ago enjoyed considerable reduction in price as a result of that policy. But they are liable to pay for it in advanced quotations if the effort to starve the producer should be continued. It looks to us as though the end to that situation is in sight."

Roofing Stock Continues Downward

Within the past two weeks roofing stock has taken a toboggan slide both in prices and demand and from present indications neither seems to have reached the bottom as yet. No. 1 stock, from its peak figure of $43 per ton three weeks ago has declined to $38. Further decreases would be no surprise to members of that division of the industry. Roofing manufacturers have evidenced their disinterest in the market by remaining out of it. Approximately 60 per cent of roofing stock is taken by this class of consumers.

Accumulations of Paper Stock Dwindling

While the condition of the paper stock market is unchanged, companies here report accumulations of stocks less today than a week ago. Board mills are not taking any larger quantities than for the past few weeks but dealers are watching closely that too large collections do not lay in warehouses. It is said that business cannot profitably be done on prices lower than those in effect today. These figures are being held firmly by all factors.

Watch Wall Paper Tendencies Closely

This is the usual dull season for wall paper although factors in the trade are watching developments closely. About the first of July the busy season will open for fall stocks. Just what prices will be is still a matter of conjecture. Much attention is being given the Canadian print situation. Whatever turn is taken there will without question affect wall paper figures here. This is expected to develop something definite in about one month.

Filer Fibre and Hoberg Go to Wrigley Building

Other paper companies have been attracted to the new Wrigley Building just north of the river on Michigan avenue. The Chicago office of the Filer Fibre Company, manufacturers of kraft paper with mills at Filer City, Mich., will go to the fifth floor of the Wrigley Building soon, the exact date having not as yet been determined. H. L. Nichols is manager of the Chicago office. With the Filer Fibre Company will go the Hoberg Paper and Fibre Company's Chicago office which is now located in the Conway Building. Both firms will ocupy the same suite of offices in the Wrigley structure.

Champion Issues Second Broadside of Series

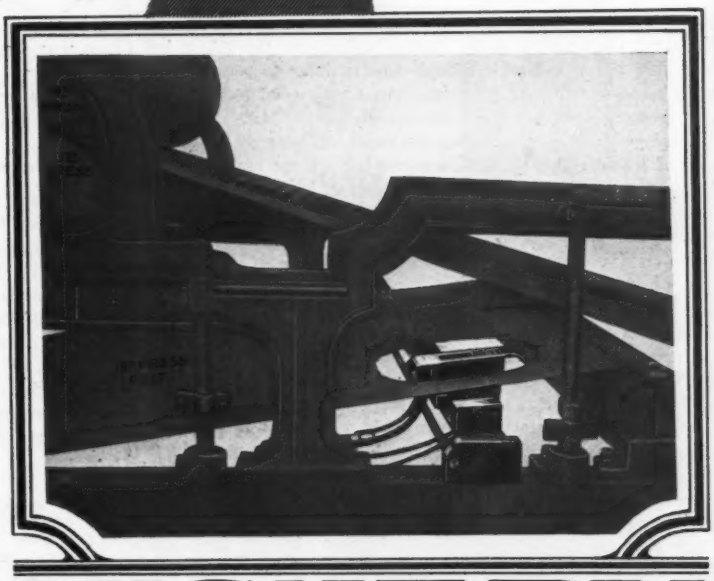
The second huge broadside of its series has just been reaching the trade from the Champion Coated Paper Company, of Hamilton, Ohio, according to the Chicago office. It is printed on a heavy coated sheet 24 inches deep by 37 inches long with one fold through the center. On the first page these words stand out in red letters under an unusually clear large reproduction of a room of the plant showing three giant paper machines: "More than $2,000,000 to assure Quality." Then follows a brief history of the company and its development. Acros the top of the two inside pages is another massive view of the entire plant from the river side. Down the left and right hand sides are three pictures of various parts of the plant including beating engines, calendering, roll storage, coating, sheet cutting and sorting. Several paragraphs of descriptive matter filled the center space. On the last page are two more views of the plant interior showing the rest of the battery of giant paper machines. The pictures on these folders represent the highest grade engraving work obtainable and demonstrate how effective they are when printed on the proper stock.

This series of broadsides is intended to give the story of the Champion Coated Paper Company, its growth and present operation.

Time SAVED

WHAT would it mean in increased profits if you could only keep the paper machine running during the time it takes to wash press felts.

Your costs remain the same whether you produce that extra two or three tons of paper or not, but your profits cease.



VICKERY Felt Conditioner

BIRD MACHINERY

Continuous operation of the paper machine is perhaps the biggest benefit the Vickery Felt Conditioner brings. It keeps the press felt in condition for making paper from the time the felt is put on the machine until it is worn out. Shutdowns for washing and changing felts are eliminated.

The Vickery Felt Conditioner also results in a more uniform sheet and longer life from felts —but write for our bulletin. It tells the complete story.

In Use in 14 Different Countries
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Canadian Builders of Bird Machinery
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TORONTO OPINIONS DIFFER ON THE MONTH'S BUSINESS

Some Say April Has Been Excellent Month While Others Declare it Was Exceptionally Quiet — Thunder Bay Paper Co. Increasing Pulp-making Capacity — Carthage Machine Co. to Establish Branch in Belleville — Canadian Barking Drum Co. Ships Many Barking Drums — Shortage of Power May Lose Pulp Mill for Campbellford — Paper Box Manufacturers to Convene at Ottawa.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, April 28, 1924.—Business in the paper line shows little if any change, although reports differ to some extent. Certain jobbers state that April has been a very good month while others declare that it has been exceptionally quiet. Mills are fairly well employed, and manufacturing stationers are busy so far as the supply of school requisites are concerned but are not rushed on the ordinary commercial lines. With the advent of better weather conditions, it is hoped that the paper trade will show more life than it has. Then the sales tax having been reduced by one per cent and the tariff announcements made by the federal parliament, the feeling of uncertainty and hesitancy, which has characterized the whole paper arena for some time, should disappear. No one is looking for a boom period but what is wanted at the present time is more confidence and optimism. Collections are reported a little better but all credits are closely watched and orders continue in small lots and are placed only as needed.

The rag and paper stock business is not very brisk as the mills are buying from hand to mouth. Collections of waste paper have fallen off fully twenty-five per cent within the last fortnight. The board mills are operating but are not producing to capacity and paper box plants are still rather slack.

There appears to be a disposition on the part of many firms and persons to cut down printing requirements to the lowest possible point, and this is having its effect also on the consumption of paper. The Ontario government has appointed an editorial committee to reduce the quantity of departmental publications and annual reports and a number will not be published at all.

There is a rumor that the E. B. Eddy Company of Hull, Que., may remove its entire match factory from that city to Deseronto where a branch of the business is located. Another rumor is to the effect that the amalgamation of the Spanish River and Abitibi Companies' interests is making progress and, that when certain technical difficulties have been met, there will be a merger, but just when that will eventuate, cannot be said at present. It is rumored there would be advantages in the merger for both companies.

Thunder Bay Paper Co. Extending

The Thunder Bay Paper Company, Port Arthur, Ont., will increase its mechanical pulp making capacity from sixty-five tons to one hundred and twenty tons by the installation of additional grinders, wet machines and presses. The Port Arthur Shipbuilding Company has been awarded the contract for the equipment, which amounts to $175,000.

Canadian Branch of American Firm

The Carthage Machine Company, of Carthage, N. Y., will establish a Canadian branch in Belleville. The company make grinders, wet machines, chippers, shredders, etc., in the pulp and paper line. A. F. Wardell, vice-president of the company, and A. K. Hinds, general manager, were recent visitors to Belleville in connection with the negotiations for a site. A Canadian charter has been secured and the branch in the Dominion will be known as the Carthage Machine Company of Canada, Limited. The new company has taken over the entire plant, property and lands of the J. C. Wilson Manufacturing Company, Belleville. F. S. Wilson, of Belleville, has been appointed general manager and vice-president of the company, A. K. Hinds is the president and A. F. Wardell is secretary-treasurer.

Vast Timber Area Burned

Four hundred thousand acres of timber were visited by fire last year in the district between Sault Ste. Marie and Hearst, Ont. Some of the scarred timber is sold to the pulp mills and, unless it is badly burned, can be used for the production of pulp and paper. Information on the burned areas has been secured by aeroplane observers, who cruised the fire swept territory in the district.

Many Barking Drums Sold

The Canadian Barking Drum Company, Toronto, of which B. Branch is manager, have lately sold six of their barking drums for installation in the large pulp and paper plant which the British and Newfoundland governments are building at Corner Brook, Newfoundland. The company have also shipped a new barking drum to Price Bros., Montmagny, Que., as well as one to Velson, Holland.

Shortage of Power Experienced

Because of the uncertainty as to the ability of the Ontario Hydro Commission to supply Campbellford, Ont., with additional 1,000 to 1,500 electrical horse power, there is every likelihood that the municipality will lose an opportunity to locate an additional pulp mill and beaver board manufacturing plant in that town. The new concern would be established by Buffalo capitalists if they could be assured of a continuous supply of 2,500 horse power required for the operation of such a plant as the principals have in contemplation. It is implied that the shortage of power in Campbellford will result in the proposed concern establishing in the province of Quebec. Central and Eastern Ontario towns are up against it for sufficient power.

Paper Visitor from the Antipodes

L. T. Watkins, president of the L. T. Watkins Company, Wellington, New Zealand, who are printing and manufacturing stationers, spent a few days in Toronto last week on business. The account of this firm was the first to be secured some years ago in New Zealand by the Provincial Paper Mills, Toronto. Mr. Watkins reports that business conditions in his country are becoming very good now that the labor situation has been more settled.

Canadian Paper Box Convention

The annual convention of the Canadian Paper Box Manufacturers Association will be held in Ottawa at the Chateau Laurier on Monday and Tuesday, June 23 and 24. The members of the Toronto Carton Club were the guests this week of the Hamilton members of the Canadian Paper Box Manufacturers Association at a luncheon held at the Connaught hotel. Interesting addresses were delivered and an enjoyable time spent.

Notes and Jottings of the Industry

W. B. Christie, superintendent of the paper department of the Hinde & Dauch Paper Company, Toronto, who recently underwent an operation, is recovering.

S. F. Duncan, treasurer of the Provincial Paper Mills, Toronto, who has been confined to his home with illness, is able to be around once more.

W. H. Sheriff, of the Hodge-Sheriff Paper Company, Toronto, left last week on an extended business trip to the Canadian West and will visit all the important paper centres as far west as Vancouver.

Seven hydroplanes will be engaged this season in patrolling the forests of Northwestern Ontario from White river to the east of the Manitoba boundary on the west, under the direction of the Department of Lands and Forests.

The legislation, which was passed at the late session of the Ontario Legislature in reference to an export embargo on hardwood trees and logs, does not become effective until put into force by the Lieutenant-Governor-in-Council.

Famous Products Series No. 20.

Right-of-Way Bond

Valley Agitator Equipment

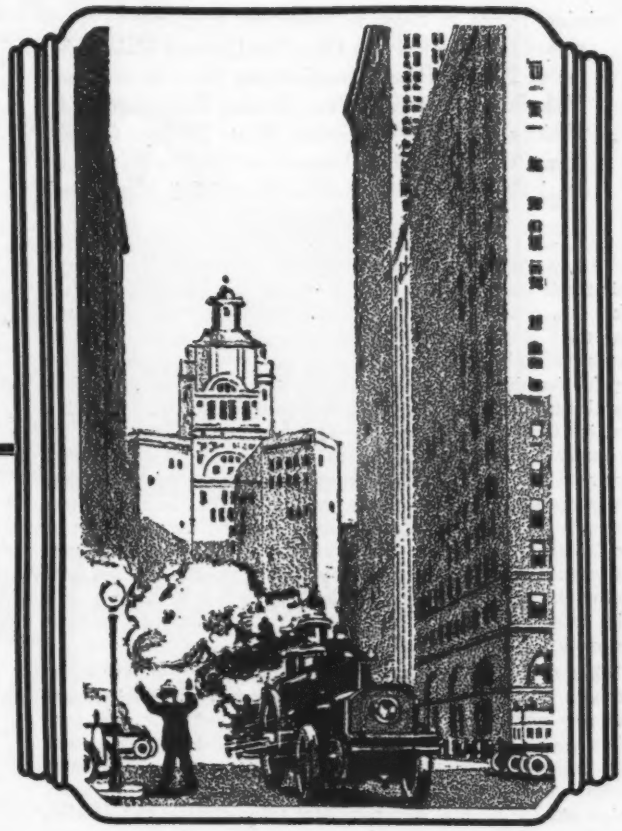
1.—Handles maximum quantity at minimum cost.

2.—Are of simple and durable construction.

3.—Is built to meet the requirements of the job.

4.—Agitator and stuff chests both vertical and horizontal for all classes of paper stock; either spur or bevel drives; arms of wood or iron.

Write for full particulars. They will be sent upon request.



Valley Iron Works Co. Equipment *is used in making* Right-of-Way Bond

A new Era of Paper-making was introduced by the Fox River Paper Company. For years it has been a recognized standard of quality among bond papers and has won a merited popularity with printers. Its uniform quality, color, strength, finish and formation are features that the years emphasize, and it is always considered a big value.

Fine raw materials and an efficient manufacturing organization stand back of Right-of-Way Bond. Good equipment must be used in making it and many pieces produced in the plant of the Valley Iron Works Company are to be found in the Fox River Paper Co. mills, among them Valley Agitators and Stuff Chests.

Valley Iron Works Company

Builders of Paper and Pulp Mill Equipment

Plant: APPLETON, WIS.

New York Office: 350 MADISON AVE.

PHILADELPHIA TRADE NONE TOO HOPEFUL OF CONDITIONS

Pessimism Begins to Show as Conditions Regarded as Temporary Continue to Hang On—Fire Destroys Main Building of Endura Paper Manufacturing Co.—Wall Papers Mills Suffer Damage in Fire—Display Room Opened by Whiting Paper Co.—Universal Waste Products Co. Reopens its Barge Traffic—International Trading Co. Adopts Stock Grading Policy—Reading Paper Mills Buy Wharf.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., April 28, 1924.—All along the line the paper industry is feeling the effects of suspended industrial activities and there is a conviction among both fine, coarse and specialty houses that there will be no immediate resumption of business and an expansive scale as the Spring advances. Dealers have been hopeful that the lull in commercial life was but a temporary condition due to the uncertain outlook in taxation and the political situation, but there has come no brightening in the business world. There is one dark spot that may become more pronounced as a market factor of the future. Already American paper industries have felt the competition of foreign mills, especially from German centers and with the settlement of European affairs and the acceptance of the Dawes proposals there is likely to be a keener rivalry for patronage between this country and our neighbors across the seas, and local dealers already note that the American mills are ready to meet with price concessions foreign competition where manufacturing facilities and costs of raw materials will permit.

While standard fine papers have not been offered at any great recession in prices there has been introduced into Philadelphia markets new products in bonds, ledgers, coated and book papers at prices much lower than those which long have been popular and with national distribution. These new offerings under various brands are of almost equal quality to those of the well known makes and are meeting with successful sales in these days of cautious buying. However there is no great rush to take advantage of the lowered prices and sales are confined to immediate needs as they have been ever since the new year began.

Most marked in the mill offerings in the local markets for the past fortnight are those of coarse papers and last week more of these special mill inducements in Krafts and wrappings made their appearance in coarse paper jobbing circles.

Wall Paper Mills Damaged by Fire

Another fire occurred early in the week when the large building occupied by the Wall Paper Mills at 905 Arch street was damaged with several thousand dollars worth of paper used in the manufacture of wall paper was destroyed. The fire was almost identical with that of a year ago when over $100,000 damage resulted. The fire started among the papers in the rear of the third floor where it was stored in the L-shaped wing.

Endura Paper Co. Burned

A Sunday afternoon fire destroyed the main building of the plant of the Endura Paper Manufacturing Company, 63rd street and Eastwick avenue, causing a damage estimated to over $100,000. The plant, a one-story L-shaped building of brick and frame construction, was burned to the ground. While the building itself was antiquated, officials of the company say that very valuable machinery was ruined by the smoke and water. The Endura Company manufactures a specially treated fibre paper used by large automobile manufacturers for the lining and construction of automobiles. It is situated along the Philadelphia and Reading tracks and during the fire the trains were tied up for an entire afternoon. A general alarm was sent in to fight the fire because of the danger to surroundings due to the large tanks of chemicals in which materials for treating the fibres were stored. One of the steam boilers exploded during the course of the fire and sent heaps of iron and debris in all directions, scattering the crowds. The fire was discovered by the watchman who saw smoke coming from a window in the rear of the plant. The Endura Company is owned by a corporation of which Robert E. Scherr is president.

Whiting Paper Co. Opens Display Room

An attractive display room has been provided in the Philadelphia headquarters of the Whiting Paper Company, at 619 Chestnut street, under the management of George Lapham. The entire lower store floor adjoining the business offices has been given over to the display of Whiting fine papers and papeteries. There were installed oak wall and counter cases, the former being devoted to exhibition of engraved and printed specimens of the announcement and high grade printing and engraving papers while the floor cases are used for the papeterie lines. The former display quarters on the third floor have been given over to the warehousing purposes. The Whiting Company has just issued its new 1924 price list and in it is included the new prices on Whitings No. 1 Linen Ledgers.

Reading Paper Mills Buy Wharf

A report from Reading, Pa., states that the Reading Paper Mills has purchased a mill and wharf property on Canal street adjoining the present plant of the company. The site was purchased at a cost of $25,000 and provides for expansion of shipping facilities and warehousing accommodations. The Reading Mills recently suspended Philadelphia headquarters and confined the sales offices to the Reading main offices.

Barge Traffic for Universal Co.

The Universal Waste Products Company, 620 S. 15th street, has again opened its barge traffic which was closed during the winter months and is now running between here and New York two barges of paper stock weekly. The low price of paper stock in the New York markets has been responsible for the renewal of barge traffic. It is expected that as conditions improve there will be more barges put into operation. Pier 78, South Wharves, have been in continuous service since last Fall and there is being received daily a boat load of paper stock for the firm's distribution. A boat load of stock is now being received weekly from the new Wilmington and Chester branches in addition to railroad shipments from the Wilmington warehouses.

International Co. to Grade Stock

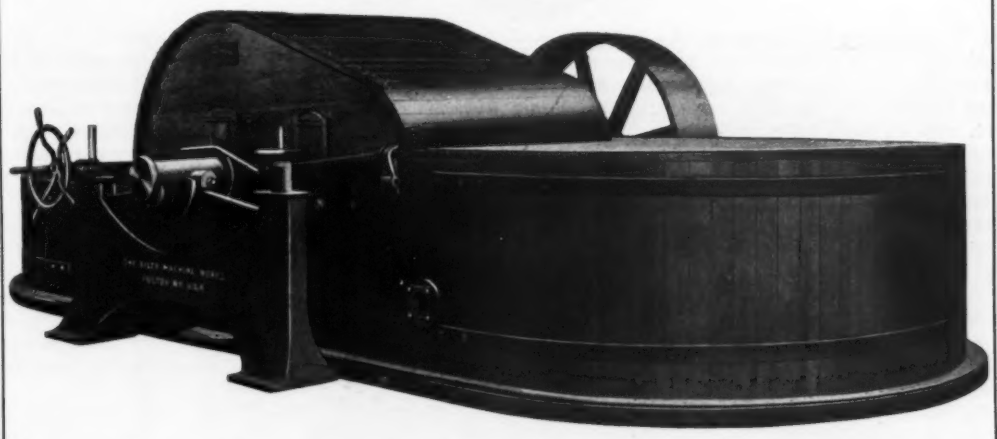
A new business policy has been adopted by the International Trading Company, 334 S. Delaware avenue, and includes the grading of waste paper, which heretofore was handled through a brokerage business from the warehouses directly without the sorting process. New electrical balers of the Minich type have been installed. The International Company which was organized over four years ago by President Peter Inrante, Vice-president Richard A. Kenny, and Secretary and Treasurer Thomas Kenny has occupied the four story warehouse and office building in the present location for its brokerage business ever since its organization.

Death of Nathan G. Steel

The trade learned with regret of the death of one of its well known and well liked fine paper salesmen, Nathan G. Steel, who for the past three years has been associated with Edward R. Grossman, 127 N. 5th street. Mr. Steel's death came unexpectedly and followed a few days' illness from an internal abcess. He was taken to the Lankenau Hospital after two days' illness at his home and died the day following his admision. His burial services were held last Saturday. He covered the printing trade for the Grossman firm and previous to joining its sales organization was associated

(*Continued on page* 70)

Dilts-



Dilts Beating Engines are Built for Your Requirements

The great advantage of the Dilts Beating Engine is that it is built to meet your particular requirements. Fifty-seven years of experience enables us to analyze your problem and suggest the proper design and construction, the right kind of fly bars and bed plates to use and other particular points which we know will give you the best results.

The Dilts Beating Engines are built in all sizes in wood or iron for the laboratory or for the heaviest commercial work.

One half century of experience is at your service. Hundreds of mills in all parts of the country have taken advantage of our experience. Will you?

6540

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

THE HUMAN FACTOR IN PAPER MANUFACTURE

Without this Element, Systems and Machines Fail to Produce Maximum Results. It Must be Developed and Given Greater Attention to Keep Pace with the Demands of Present Day Paper Making.

By E. J. McDonnell, President Marr-McDonnell Co.

In the past few years we have witnessed the introduction of many new machines and new methods in the art of paper making. We now have organizations of Technical men, Superintendents and Paper Salesmen and Cost Men, whose object is to improve in all ways, the trade with which they are affiliated.

Very fine books have been published, giving valuable information on all departments of paper manufacture. These books are bound to be of immense value to the ambitious young man who is looking to a future in the industry. We refer to "Manufacture of Pulp and Paper," and the paper trade surely is indebted to the authors of this work, for it places in the hands of the man in the mill, the knowledge he has long desired, and this coupled with his practical work, will make his progress much more rapid and sure.

E. J. McDonnell

The associations mentioned can do a great deal in continuing the introduction of new or improved methods over the present day practices. The superintendents are well equipped to bring before machinery manufacturers and supply men who attend their meetings, facts that will enable these men to understand better what the paper maker requires. Honest discussions at these meetings of the problems of each mill, are bound to produce desired results and make progress possible.

Technical Men Have Helped

The technical men too, have been of great value in the onward march of progress, and many improved processes used in the mills have originated from their meetings. They were responsible for standardizing the grading of rags and other raw materials used in the industry. Many members of their organization are practical mill men, and when the chemist and mill man get together to plan out a line of action, something worth while is assured.

In the minds of a few, the value of the Cost Association is more or less questioned, but to those who have had experience with Cost men and their methods, their place in the industry is second to none, and the figures of cost produced by these men, on more than one occasion have been responsible for improvements that would not have come otherwise. Where the Cost men have been doubted, is where you will find cooperation and desire for progress in the back ground.

The Salesmen Association is a factor that can be linked with those of the other associations in producing a chain that will be strong enough to pull the trade onward and upward for many years to come, if proper consideration and action is taken in providing what the author considers the missing link in the chain as it now stands.

This missing link, can be properly named the man in the mill. The beater engineer, the machine tender, the rag room foreman, the boss finisher or any number of men in the mill, upon whom is placed the actual work of making the paper. These men do not receive the attention that is necessary in bringing out the best possible results. Nor do they absorb the ideas born in the meetings of the various organizations mentioned. The knowledge they possess of their trade is what they have picked up after years of work, and no outside aid in the shape of education, or meetings in which their work is under discussion, is ever given them. If the time ever comes when the men who actually make the paper, are given the opportunity of knowing and taking part in discussing the various problems that confront the manufacturer of paper, the trade will witness the greatest and most rapid progress it could hope for. If these men were given such opportunities, many of the present day labor problems would disappear, in their place we would have more minds, as well as practical minds devoted to the betterment of the industry as a whole.

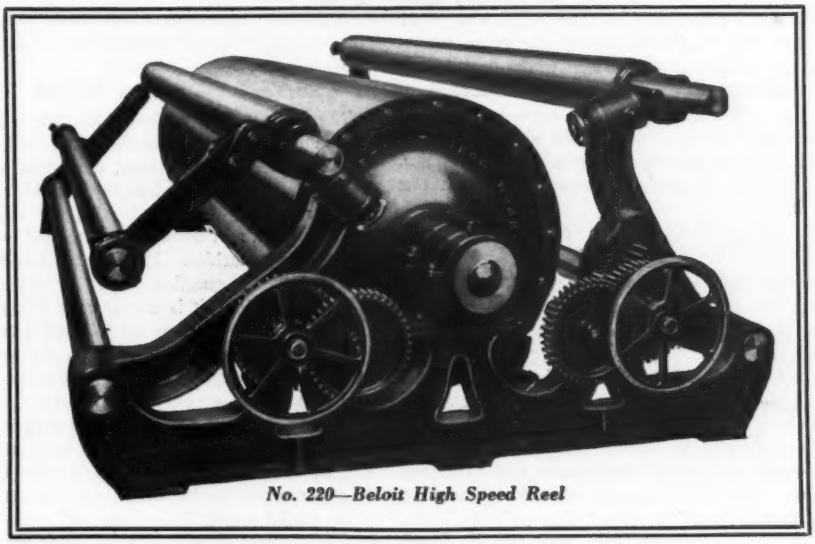
In some mills half hearted attempts have been made to have meetings of the employees to discuss matters relating to their work, but for some reason, in many instances the practice was not continued and results were not as great as were expected. As a matter of fact the cause can usually be found in the man who had the plan in charge. He did not take proper care of the project and did not provide programmes that would hold the interest of the men. He also would allow the meetings of these men to get away from the object which brought them together, and eventually after a little dissension happened to appear among two or three of those present, the idea was allowed to die a natural death, and the mill went back into its old stride, being, if anything, worse off than it was before the plan had been tried.

Must Know Papermaking Business

These failures can be avoided if the proper man is given charge of conducting the meetings and is not interfered with in the matter. He must be a man who knows the business of papermaking from every angle, and must have the respect and confidence of the men in the mill, and be able to do what he tries to teach them. He also must have a sincere desire to make men, to bring out the talents they possess. The meetings should be businesslike and avoid every semblance of a good time affair. They have no relation to what some call get-together meetings, which produces a lot of wild talk of no consequence. These meetings are prepared for the man who is looking to the future, and the men who attend must be in earnest and those who are not, should be dropped as quickly as possible, for they will, sooner or later, produce trouble that will threaten the success of the plan.

Every mill has at least a dozen men who are anxious to get on in the trade. Regardless of their position in the mill, if they have the proper spirit, they should be taken care of and given a chance that will eventually react to the success of the company.

If the mill does not have a man capable of taking and developing such men as these, it would be profitable for them to secure such a man and put the job in his hands. Until the time comes when plants will have made provision for the promotion of its men into more responsible positions, just so long will it have to stand the drawbacks that are now evident when sickness or death remove



No. 220—Beloit High Speed Reel

Insure Yourself Against Loss of Paper, Accidents, Inefficiency

THE BELOIT UNIFORM SPEED REEL effects a saving of paper every time you change reel drums. It displaces the old obsolete method, and insures steady, reliable performance plus absolute assurance of economy of operation. Furthermore, it entirely eliminates the danger of drawing men between reels of the conventional upright type, effecting a further saving in man power and accident liability. It can be depended upon to wind a beautiful roll that is very uniform in hardness.

Moreover the extra refinements added to this reel make it much handier than any of similar design. An instance of this is the ease with which paper is started on the drum. The passer does not have to change hands when performing this operation. Its simplicity and ease of operation is a revelation.

Let us know the face of your calender rolls and we will gladly submit a figure covering your particular case.

Beloit Iron Works **Beloit, Wis., U. S. A.**

Established **Since 1858**

the men who they have looked to in maintaining the quality and quantity of the product of their plant. How often do we hear that So and So's paper is not as good as it was because they have a new superintendent, who has not yet gotten things settled down. If careful attention had been given to the matter of having a man ready to take John Jones' place when he was ready to stop, these conditions would have been avoided, and the company would not suffer the losses that usually occur when such changes are made.

It does seem rather queer that manufacturers will carefully figure out the life and usefulness of a machine, and place upon it a proper depreciation charge, while they ignore completely, the more important matter of the life and usefulness of the men whom they depend upon to get out of those machines the best and greatest amount of work.

Every position of importance in a paper mill should have an understudy capable of stepping into the job at a moment's notice, and continuing it as it was, or going the man who had it one better, in improving it.

Human Factor Important

In these things do we realize the importance of the Human Factor in the business, for no matter how fine our machines, or complete our systems, if we do not consider the men who operate them, they are of little use.

Some measures should be taken in every mill for providing the men who desire knowledge and promotion, with means of obtaining same. When this has been accomplished and it is possible to get a line on the men who are really in earnest, those men should be given every possible means of further development and care, and the men whose positions they are some day to occupy, must be taught that they are bound to extend every aid, without feeling that their jobs are threatened. This in some cases will be found very difficult to accomplish without trouble, but it must be done if the plan is to carry through.

In the old days of paper making, some conditions existed which if maintained to the present day, would undoubtedly be valuable in many respects. We refer to the men of those times who were beater engineers and machine tenders in the full sense of those names. In those days, we had no boss machine tenders or boss beatermen, but the men who got on without the assistance of such superiors, were fully capable and produced paper of uniformity. To a great extent this was due to the responsibility that was placed upon them, and also their knowledge of the requirements of that paper. They got everything regarding the order being made, first-hand from the Super or in many instances from the manufacturer himself. They watched every required quality of the paper closely, and all worked together. The beater man would insist that rags of proper quality be delivered to him from the rag room, and the machine tender would equally insist that the beater man deliver to him, stuff that was suitable to the order being made. They had no night boss to shoulder the responsibility of defective paper, consequently they were on the job constantly.

But as mills became larger, and more machines were installed and production was increased, the Asst. Superintendent, the Boss machine tender and the night boss were introduced and from that time the machine tender and the beater man of the old school disappeared, and instead of having two men to watch carefully and be responsible for the product of one machine, we have one man who was responsible for the product of three or four machines, and it is no wonder that the uniformity of paper was not as good as it had been.

These conditions explain to a great extent why we have so few all around paper makers at the present time. The machine tender of long ago was usually a good mechanic and kept his machine in A-1 condition, today he does not know how to put a belt together. He is a specialist in a sense, and his whole job seems to consist in keeping the paper on the machine; very seldom do you find him checking up the various qualities that the paper is supposed to have. This is left to the boss machine tender, or some one else who is supposed to have authority over the machine tender.

These conditions are not due to any act or thought of present day machine tenders, but are the results of systems of operations now in vogue in the great majority of mills. The writer believes the machine tenders of today would welcome the opportunity of assuming greater responsibility, and chance of securing more knowledge of their trade. We must have Superintendents, and these men of the beaters and machines, develop into the best Superintendents and we must have men to take their places; so the situation arises as to what is the best method for developing competent and skilled paper makers.

Present Method Wrong

The present day method does not accomplish the desired end, as can be readily recognized by the following career of one John Jones, who is hired as third or fourth hand on a paper machine. In the first place John has no fixed idea in his mind of becoming a paper maker. He was looking for work and happened to drift into the D. A. mill when there happened to be a vacancy on the crew of the paper machine. He may be sixteen years of age, or thirty-six, it is not a question of age or fitness for the job with those who engaged him, it is a matter of filling a vacancy.

John struggles along on the job, and if there is not too much broke to hustle he will probably stick on the job a while, but ninety out of one hundred Johns decide about the time they have learned enough to be in a position for promotion, to quit the position for something else, and a new John takes their place, until finally one is secured who stays on and becomes backtender or second hand. Usually he succeeds through his own ability, and is not the protege of any machine tender as we were in the old days when the machine tender engaged his help and was careful in picking out a boy who might develop into a paper maker. He felt responsible for the boy's progress, and being boss of his help, insisted on results. If John continues to show progress, and an opportunity of machine tending happens and he secures it, he stands a fair chance of developing into a real machine tender, if he is fortunate enough in having a real boss machine tender over him, or friendly and interested mates on opposite tours. From now on his progress is entirely in his own hands. If he is desirous of further promotion, he can by proper effort and study secure it, by demonstrating his ability as a machine tender who does things a bit better and quicker than the ordinary machine tender. He has all avenues of progress open to him if he will use same. He can become adept in color matching, formula making and character detecting, if he will confine his senses to these things. Mills cannot hide them from him, and they are always within his reach. It seems, but few machine tenders realize the opportunities they are daily passing by, and it is not until they have the responsibilities of promotion put up to them that they recognize the value of neglected sources of information that they must now seek, in order to produce what will be expected from them.

The writer knows of a successful mill owner of today, who at the age of twenty was considered an expert machine tender. This man had been running a machine in a fine machine mill when there happened to be a position of boss machine tender open. Although manys years younger in age and experience than the other machine tenders in the mill, he felt capable of assuming the duties of the job, and when he heard that a new man who had been hired as a machine tender was to have the position, he put up a vigorous argument, and when he failed to get the post, he gave his notice, and much against the advice of the superintendent, accepted a job of machine tending on one of the toughest jobs imagineable in another mill. He was successful on this job and secured all the knowledge he could on the materials, methods and machines being used. From here he went to another mill as Superintendent, and the knowledge he picked up when machine tender, stood him in good stead when it was up to him to decide on colors, grades and the many things

(*Continued on page 66*)

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THE SEABOARD—*Through the Heart of the South*

Editorial

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HENRY J. BERGER, Editor

"PAPER DEFINITIONS" OUT

"Classifications and Definitions of Paper," which was originally printed in the PAPER TRADE JOURNAL several weeks ago has just been issued in book form. The reprinting of this work was undertaken by the PAPER TRADE JOURNAL at the suggestion of numerous subscribers, who appreciating the value of the definitions urged that they be reprinted in some form for handy and permanent use. Advance orders for ten to twenty-five copies, in some cases, have already been received from individual concerns.

The book is handsomely bound in cloth, 6 x 9, and contains 87 pages. It will make a valuable addition to the library of any paper man and should be in the hands of every seller and buyer of paper. The price of the volume post paid is $1.50. It should be ordered from the Lockwood Trade Journal Company, Inc., 10 East 39th street, New York.

CANADA'S PAPER EXPORTS GROW

Canada's foreign markets for paper continued to show surprising expansion. The exports of pulp and paper from the Dominion for market, according to figures just made public by the Canadian Pulp and Paper Association for the month of March were valued at $14,720,223. This was an increase of $3,773,024 over the previous month and is the highest total recorded since October 1920 when prices for pulp and paper were considerably higher than they are today and means, of course, that the tonnage increased even more greatly than is indicated by even the big increase shows in dollars and cents.

The exports of news print for March were valued at $9,756,330 as compared with $8,609,766 for March of last year, the exports of bank paper were $28,157 as compared with $37.76, the exports of writing paper were $20,049 as compared with $52,733, the exports of wrapping paper were $323,108 as compared with $363,285, the exports of all other varieties of paper were $476,929 as compared with $480,468, and the total exports of paper for March were $10,604,573, as compared with $9,544,019 for March of last year.

The exports of pulp for March, however, show a slight decline which is probably accounted for by the larger exports of paper. The exports of mechanical pulp for March were $750,286 as compared with $723,094, the exports of bleached sulphite were $1,416,235 as compared with $1,522,476, the exports of unbleached sulphite were $957,071 as compared with $1,168,226, the exports of sulphate were $992,058 as compared with $994,428 and the exports of all varieties of pulp for March were $4,115,650 as compared with $4,408,227 for March of last year.

The exports of pulpwood in March amounted to 195,924 cords valued at $1,858,546 which was a considerable advance over the previous month. For the first quarter of the year Canada exported 307,114 cords of pulpwood valued at $3,843,160 compared with 346,651 cords valued at $3,045,450 in the corresponding quarter of 1923.

CONFLICTING TENDENCIES IN TRADE

Conflicting tendencies in industry and trade persist, according to the Guaranty Trust Company of New York.

Lessened production in some basic industries, a reduced volume of freight movement, the decline of commodity prices, and accentuation of the conservatism which characterizes buying policies, have all reacted on business sentiment, says the company. The passage of the bonus bill by the Senate substantially in the form approved by the House increases the likelihood of the enactment of the measure despite a possible veto. And the continued delay in action on the important matter of tax revision is necessarily a disturbing element in the business situation. The numerous Congressional inquiries have also contributed to the weakening of confidence in the business outlook. A recent compilation shows that eleven Senate committees and five House committees, composed of 50 Senators and 30 Representatives, are engaged in various investigations.

It is easy, however, to exaggerate the significance of the recessions in some lines of production and trade. A year ago activity was at an extraordinarily high level, and current records somewhat below those of that period are consistent with the maintenance of generally favorable business. Apart from political uncertainties, the economic features of the business situation indicate the probable continuance of production and trade at close to normal levels. There is no threat of a general depression comparable to that of 1920-21.

President Coolidge's address at the annual luncheon of the Associated Press last week was gratifying in its promise of continued adherence to sane and conservative principles.

The prompt acceptance of the report of the Dawes Committee by the governments chiefly concerned gives renewed hope that a practical plan for dealing with the reparation problem has at last been formulated.

American interests are vitally involved in the economic rehabilitation of Europe. And it will be an occasion for lasting gratification and justifiable pride if it shall prove that a body of experts, under the leadership of an American business man, has pointed the way to a definite removal of the chief obstacle to progress in the restoration of normal world conditions.

In spite of the high level of building activity which has been maintained for more than two years, it is evident that an appreciable part of the shortage resulting from the relative inaction of the war period still remains. From time to time attempts have been made to estimate the extent of the shortage and the progress already made toward its removal. These estimates show considerable variance, but in general they tend toward the conclusion that a dearth of structures for the country as a whole is still apparent.

The greatest obstacle to an even rate of progress in construction has been the tendency for the demand for new buildings to induce a rate of activity beyond the capacity of the industry. In the spring of 1923, for example, the huge volume of contemplated construction placed the industry in a critical position. Both wage scales and the costs of materials, which had been rising throughout 1922, were out of all proportion to the general commodity price level. In many cases it became impossible to make deliveries, and the shortage of labor resulted in renewed wage advances. The result was a situation which is best described as disorganization. Many projects were postponed, and in some instances work already under way

was abandoned. The number of new projects undertaken declined sharply until late in the summer, with the result that, measured by physical volume, apparently less new construction was begun in 1923 than in the preceding year.

A sharp recovery, however, has taken place in recent months. The value of contracts awarded during the first quarter in 36 states is 15 per cent higher than the corresponding total last year; but the increase is more than accounted for by the figures for New York City, which are more than double those of a year ago. The remainder of the country shows a decrease of about 1 per cent in total value, which probably represents a decrease of about 10 per cent in physical volume.

The same irregularity is shown in the distribution of contracts in March. Taking into consideration the slightly higher costs, it is doubtful whether the actual physical volume represented by last month's contracts was enough larger than that for February to cover the usual seasonal movement. As compared with a year ago, March shows an increase in value of 15 per cent, which is partly, though not entirely, due to higher costs. With costs at their present level, and with the difficulties of last year in retrospect, it is not surprising that the amount of new construction planned in most sections should be somewhat lower than that of a year ago.

Freight Rate Decisions on Pulp

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 23, 1924.—The rate on wood pulp in carloads from Wilder, Vt., to Livermore Falls, Me., has not been found unreasonable by the Interstate Commerce Commission, and the complaint has been dismissed.

The decision was rendered in case 14,082 of the International Paper Company against the Director General of Railroads.

The Commission has also handed down a decision in case 15,067 of the American Wood Pulp Corporation against the Baltimore & Ohio Railroad, in which the Commissioners say in part:

"Lighterage charges assessed on imported wood pulp lightered from and to various piers at Baltimore, Maryland, during the period of August to December, 1919, found inapplicable. Reparation awarded."

A Correction

The PAPER TRADE JOURNAL in its description of the displays at the Second Paper Industries Exposition was incorrect in stating that the Voith High Pressure Stock Inlet was displayed at the booth of the American Voith Contact Company. The display was made at the booth of the Valley Iron Works Company, by which concern this equipment is built in the United States. The Voith Company holds the patent rights on this equipment, but the Valley Iron Works Company has a contract for the sale and exclusive right of building the equipment in the United States.

Machine Tenders at Smith Paper Co. Go on Strike

[FROM OUR REGULAR CORRESPONDENT.]

LEE, Mass., April 28, 1924.—The machine tenders and their helpers in the Smith Paper Company's mills struck this morning for a 20 per cent advance in wages, which was refused. Willard Smith, manager of the mills, said he had no statement to make other than that they were paying better wages now in the Smith mills than any other tissue paper manufacturing mills in the country. The men gave out no statement. Between 175 and 200 men are affected.

Recent Incorporations

GENERAL TISSUE CORPORATION, Frankfort, New York, operate paper mills, 750 shares preferred stock, $100 each; 15 common, no par value. Incorporators: L. Hecht, L. May, H. A. Gilmore. Attorney, C. D. Thomas, Herkimer.

FRANKLIN PAPER STOCK COMPANY, Franklin, Ohio. Capital, $100,000. Incorporators: Sol and Harry B. Slavin.

SHERMAN PAPER AND BOX COMPANY, INC., Boston, Massachusetts. Capital, $100,000; 1,000 shares $100 each. President, Beatrice B. Sherman, treasurer; George Cummings, and Sanda R. Herron.

S. AND S. PAPER PRODUCTS COMPANY, Cudahy, Wisconsin. Capital, $100,000; 1,000 shares par $100. Incorporators: John Stasazak, Frank Sztukowski and Cecilia Sztukowski.

OSHKOSH CORRUGATED BOX MANUFACTURING COMPANY, Oshkosh, Wisconsin. Capital, $100,000; 1,000 shares par $100. Incorporators: Jacob P. Verhulst and John Orlebeke.

THE SAFETY CARTON AND CONTAINER COMPANY, Cincinnati, Ohio. Capital, $500. Incorporators: Erich Schinscholl, George Ringshauser, John W. Lane, Frank G. Hoferer.

LONE STAR PAPER MILLS, Commerce, Texas. Capital, $40,000. Incorporators: T. A. Cheeves, George H. Carter, J. M. Irwin.

UNGER PULP FIBER PRODUCTS COMPANY, Milwaukee, Wisconsin. Capital, $50,000; 500 shares par $100. Incorporators: William E. Unger, Max E. Unger and George F. Unger.

BARTOL & HEALEY COMPANY, Boston, Massachusetts, paper. Capital, $100,000. Incorporators: Clarkson of Dorchester, Florence M. Leath of Wrentham and Arthur V. Grimes, of Brookline.

Buys Control of Champion Fiber Co.

The Champion Coated Paper Company of Hamilton, Ohio, has purchased the controlling interests of Peter G. Thomson, Jr., of Cincinnati, in the Champion Fiber Company, according to an announcement made Saturday by Walter D. Randall, vice-president of the Hamilton company. The Fiber company's plant is located in Canton, N. C., and the purchase of Thomson's interests will give the Champion Coated Paper Company complete control of both interests. The first step will be the reorganization of the board of directors at a meeting of the stockholders of the Champion Fiber Company next week. The Champion Fiber Company is capitalized at $2,000,000 preferred stock and $1,000,000 common stock.

In addition to Thomson, the present directors of the Champion Fiber Company are: Frank H. Simpson, chairman; Charles A. Hinsch, Reuben R. Robertson, Mrs. Laura Simpson Thomson, W. A. Bagless and Charles S. Bryant. All of the stock is said to be closely held. The amount involved in the deal was not made public. Randall stated that the Cincinnati offices of the Champion Fiber Company will be moved to Hamilton, but that the plant in Canton, N. C., would continue in operation.

House Passes Clarke Forestry Bill

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 30, 1924.—The House of Representatives last week passed the Clarke forestry bill after an all day's debate. The bill as it finally passed was amended, but it is understood that the amendments are not of vital importance to the bill. It has been referred to the Senate Committe on Agriculture.

Arranges for Bond Issue

SAN FRANCISCO, Cal., April 28, 1924.—A bond issue of $750,000 has been arranged by the Paraffine Companies, Inc. The entire amount will be used for plant extensions and improvements as provided for in a 1924 expansion program. A general contract for the improvements has been let to Fred Stamm. Leland Rosener is the engineer.

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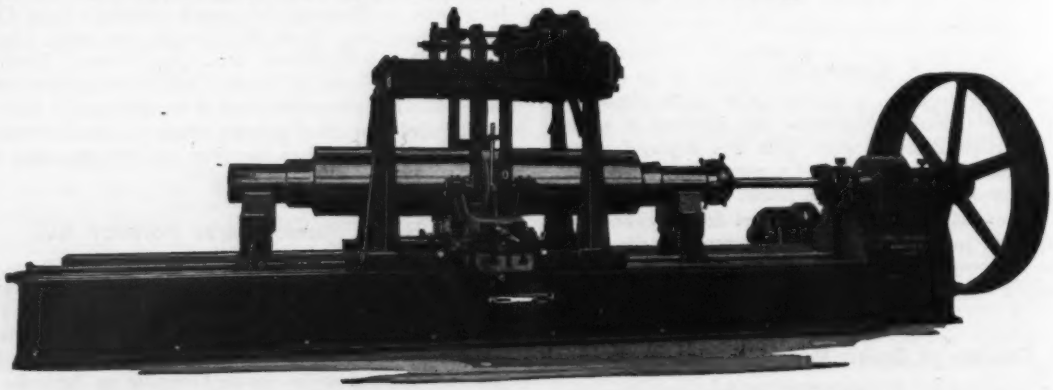

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Conducted by W.G. MacNAUGHTON, Secretary

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(*To be continued*)

Washing of Sulphite Pulp

For satisfactory operation of the screens and wet machines or deckers and also that the operation and the product of the paper machine may be satisfactory, the sulphite pulp must be thoroughly washed. The appended inquiry illustrates one of the problems of a sulphite mill, which will be dealt with by the Technical Association according to the plan which is in use. Letters on the subject sent in by members will be transcribed in blank (omitting the names and addresses) and distributed to the members who have contributed to it.

If non-members desire to participate an application for membership in the Association should be filed which would be dealt with promptly.—THE SECRETARY.

"We are interested in developing a control method to be used in determining the length of time the sulphite pulp should be washed. In this connection we have made a few tests. After washing 4 hours the percentage of sulphur dioxide in the wash water was 0.0026 per cent and practically the same after 5 hours washing. There is, however, more foam with the pulp washed 4 hours. The wash water from this 4 hour treatment has a light yellow tinge and upon concentrating 500 cc. to 100 cc. the color was light red.

"We would like to know when a wash is considered finished both for news stock and easy bleaching sulphite, and what relation the percentage of sulphur dioxide in the wash water bears to the cleanliness of the stock and also the total solids in the wash water.

"We would be very glad to have any information in connection with the washing of sulphite stock, the drainage area required in square feet per ton of pulp, how the pulp should be handled in blowing and washing, when the wash water should be turned on and how we can know when the pulp is completely washed.—"A MEMBER."

CONTROL OF DECAY AND MOLDING OF WOOD PULP

By C. Audrey Richards[1]

Groundwood pulp which has been stored for several months is likely to be so badly rotted and molded that it can not be used satisfactorily in the manufacture of the grade of papers for which it was intended. Chemical pulps are not readily susceptible to decay unless stored in the form of wet laps. In ordinary commercial practice the wet laps are stored only for a comparatively short period and hence do not deteriorate as much as groundwood pulps but they do get moldy. The only known way to prevent deterioration in wood pulps is by preservative chemical treatment.

Fig. 1.
Fan-shaped Layers of Mycelium of a Wood-destroying Fungus on the Surface of Groundwood Pulp.

What Causes Deterioration of Pulp

The deterioration of pulp is brought about by fungi and bacteria. There are two groups of fungi: (1) the wood-destroying fungi which rot the pulp and (2) the molds which discolor it but do not appreciably weaken the fibers.

The wood-destroying fungi are plants which produce such fruit-bodies as the brackets, conchs, leathery incrustations, mushrooms and toad-stools which are frequently seen on trees, both standing and fallen, rotten wood in soil, etc. The mycelium or thread-like vegetative portion of the plant grows into the wood or pulp, takes its nourishment from the fiber walls and weakens or completely destroys the fibers. The silky white or yellow fungous threads often form glistening fan-shaped layers on the surface of the pulp. See Figures 1 and 2. Each type of wood-destroying fungus has a characteristic effect on groundwork pulp. Those which show no visible effect and those which bleach the pulp may or may not affect the strength of the fibers. Other fungi produce brown to black areas in the pulp which are decidedly weaker than the normal pulp and the fibers become so brittle that they break up into short lengths and are lost in the white water. See Figure 3. The earliest visible effect of this type of infection in the pulp is the production of a rich cream color which with age turns various shades of brown or black. See Figure 4. The stage varying from deep cinnamon to russet brown which is commonly called "red rust" among the pulp manufacturers or users is caused by a number of fungi. See Figure 5. The author believes that any of the fungi which cause brown rot in wood will cause a similar "red rusted" condition in groundwood pulp. Even though the infection may not have proceeded far enough to appreciably decrease the production the discoloration is sufficient to lower the quality of paper manufactured from it.

Fig. 2.
Mycelium of a Wood-Destroying Fungus on the Surface of Groundwood Pulp.

Molds Not as Serious as Fungi

Molds do not cause as serious a loss as do the wood-destroying fungi although there are many more kinds of them. One variety produces a very disagreeable odor in very wet pulp. The pulp is bleached but is slimy. Moreover, the bleached areas are almost invariably surrounded by

[1]Assistant Pathologist, Laboratory of Forest Pathology, Bureau of Plant Industry, in cooperation with the Forest Products Laboratory, U. S. Forest Service, Madison, Wis.

a gray discoloration similar to the iron-tannin discoloration so frequently found in groundwood pulp. This gray boundary is frequently invaded by several kinds of molds. See Figure 6. Other varieties of molds produce yellow, green, blue, brown or black powdery masses of spores on the surfaces of pulp. Often the whole surface is covered with a sooty mass of spores. See Figure 7. The colorless fungous threads which produce these spores grow into the pulp intertwining the fibers but not appreciably weakening them. Most of the innumerable spores wash off in the beaters so that the beaten pulp may be as white as uninfected pulp. However, there may be some difficulty in separating the fibers. There are other molds which stain the pulp yellow, green, red or purple. Pulp badly stained with these fungi makes a lower grade of paper. Molds which produce brown or black areas in the infected pulp causes much trouble because they make the infected pulp difficult to open up in the beater and the resultant paper lumpy and dark in color. See Figures 8 and 9.

"Brown Spots"

Many mills have suffered for the past two years from a "brown spot" epidemic which was widespread, at least from New York to Washington state. This type of infection is very much like those caused by certain molds but no fungus threads are associated with it. A bacterium similar to one isolated from river water taken at a

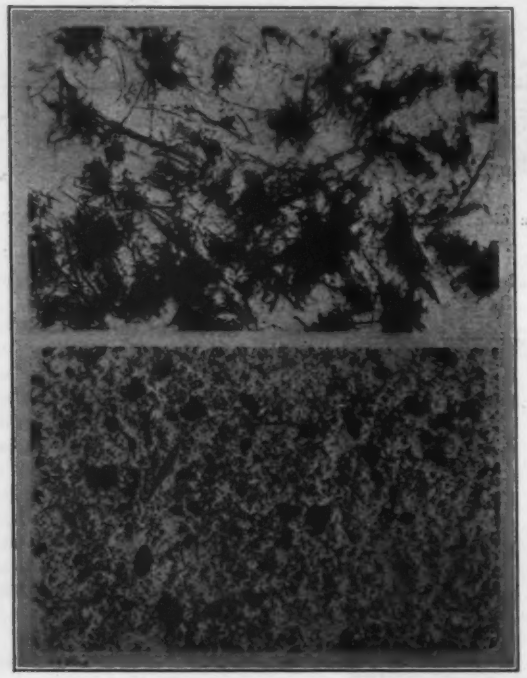

FIG. 3.

Photomicrographs of Fibers of Sound (above) and Decayed Ground Wood Pulp. Note how the Fibers have been Broken up into short Fragments by the Action of the Wood-destroying Fungi.

mill where much of the small "brown spot" infection occurs seems to be the causal organism. See Figure 10. The damage seems to be most serious in the interior of large piles. The outer two to six layers of laps may be entirely free from this type of infection while the interior of the pile is entirely worthless for the manufacture of medium and high grade papers.

This "brown spot" is the only type of bacterial infection that has been found to be in any way serious. There is some evidence that the serious outbreak of this infection may be correlated with the practice of extensive recirculation of the white water. Fungus spores are also found in the river water but they do not grow and multiply in the water as do the bacteria so that the recirculation of white water would have no effect on the amount of fungus infection.

How Fungi Get Into Pulp

There are several ways in which the pulp might become infected. Beadle and Stevens[2], Blair[3], and Acree[4] state that the fungi in

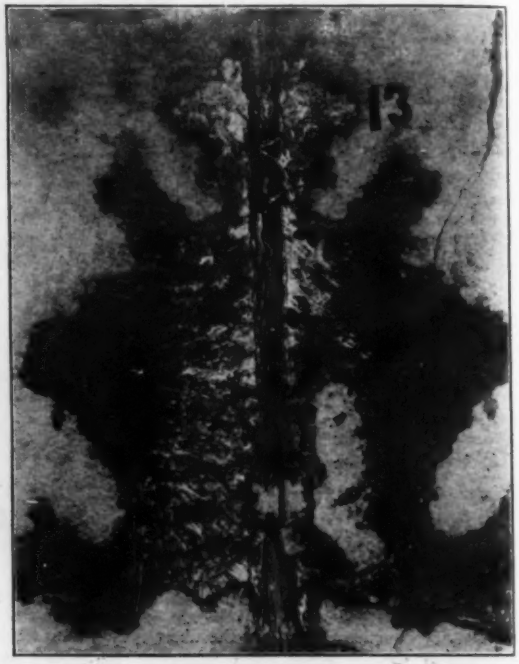

FIG. 4.

The Darkened Area Shows the Work of Another Wood-destroying Fungus.

infected pulpwood become disseminated in the grinding process, setting up many centers of infection in the pulp. No data have been published to establish this point.

The writer believes that heat at the surface of the grinding stone kills the fungi in the grinding process just as surely as does the chemical process. The data[5] which point to this conclusion unfortunately are insufficient to definitely prove it. It does seem to be true that pulp made from rotten wood deteriorates faster than that made from sound wood. The explanation of this may be that the rotten wood is partially hydrolyzed by the action of the fungus and therefore pulp made from it furnishes more readily available food for other fungi with which the pulp may come in contact after leaving the grinder.

Undoubtedly some of the infection in pulp comes from the spores which are common in the air.

Pulp frequently becomes infected from rotten material which is in contact with it. For instance, in one pile rot had extended in six months' time through eight laps of groundwood from an old board which had been included in the pulp pile. Rot frequently extends rapidly up into the pulp pile from a board platform. Small

[2] Beadle, Clayton and Stevens, H. P. Diseases in pulpwood and pulp. Paper Worker and British Trade Journal. Nov. 1909. Reviewed in PAPER TRADE JOURNAL 49; 42, 46, 48, 54. December 2, 1909.

[3] Blair, R. J. Decay in pulpwood—deterioration in pulp. The Paper Industry. 2; 95-96. April, 1920.

[4] Acree, S. F. Destruction of wood and pulp by fungi and bacteria. Pulp and Paper Magazine of Canada, 17; 569-571. July, 1919.

[5] Kress, Otto, Humphrey, C. J., Richards, C. A., Bray, M.W., and Staidl, J. A. Control of decay in pulp and pulpwood. To be published in U. S. D. A. Bulletin.

particles of rotten material carried into the piles on the shoes of the workmen may be a source of considerable loss.

Wolesky[6] says that infection depends upon the infected wood. Beadle and Stevens on the other hand think that little infection comes from water. However, after examining large laps of pulp, one becomes impressed with the fact that much of the infection is internal, that is, that many of the infected spots or areas originate within the laps. It is true that many species of fungi found on pulp are commonly found in river water. If we accept the fact that fungi do not live through the grinding process the most important means then for such infection is from the water used in the manufacturing processes. This seems to be the logical source of infection in the majority of cases.

The Preservation of Groundwood Pulp

Every precaution should be taken to keep pulp free from infection. Possibilities of contamination from the air would be greatly reduced if no decayed wood, pulp and other debris are tolerated about the mill and yards. Pulp should never be stored in contact with untreated wood, soil, water, old infected pulp or other debris. All foreign particles such as small pieces of wood, soil, etc., must be kept out of the pulp pile. Accepting the theory that a large amount of infection comes from the water, an effective mechanical filter would considerably lessen the trouble.

However, preventive measures of this type are not sufficient. They all help but a chemical treatment of the pulp which will

FIG. 5.
"Red-rusted" Ground Wood Pulp.

prevent the growth of fungi and bacteria is the only means which will keep it clean until the end of the storage period.

A previous paper[8] describes briefly the results of the earlier investigations on chemicals which might be valuable as groundwood preservatives. The complete results of these earlier tests will be published in a United States Department of Agriculture Bulletin.

Out of 106 chemicals tested, sodium fluoride (48 pounds per ton) gave the best results. See Figure 11. Borax (80 pounds per ton) was almost as good as sodium fluoride but it required more pounds per ton to obtain equivalent results.

Boric (boracic) acid (80 pounds per ton) was equal or somewhat superior to borax but its cost was considered prohibitive.

Sodium dinitrophenolate (2 pounds per ton) was as effective as

FIG. 6.
A Lap of Pulp Showing Bleached Areas Surrounded by Gray Pulp which is Invaded by many Molds.

anything tried, but the yellowish chemical discoloration of the pulp may prove objectionable for some purposes. The yellow color readily washes out but the pulp remains browner than normal.

Since the publication of the preliminary report mentioned above, efforts have been made to reduce the cost of treatment. This result might be possible either by improved methods which would cut down the amount of chemical required or by the use of cheaper or more toxic materials.

Sodium fluoride has been used successfully during the past season by one of the co-operating mills. The cost of the treatment was reduced considerably by varying the amount of chemical applied in proportion to the length of time the treated pulp was to remain in storage. Groundwood pulp was treated as follows:

350 Tons with 24 pounds sodium fluoride per ton.
350 Tons with 18 pounds sodium fluoride per ton.
500 Tons with 11 pounds sodium fluoride per ton.

The amount of sodium fluoride supposedly used was 20,200 pounds but the amount purchased was 18,000 pounds, so in some cases smaller amounts were used then are indicated above. The operators had been particularly bothered with the bacterial brown spot, and the sodium fluoride treatment eliminated the trouble. The treated pulp was practically clean of all infection although some black sooty mold did appear. However, this type of infection is not serious because the pulp washes clean in the beater.

Naphthalene, paradichlorobenzene and betanapthol added to cymene (crude spruce turpentine) made very effective preservatives for pulp in the laboratory experiments and small scale mill runs.

[6] Wolesky, Ferdinand. Aufbewahrung von feuchten Holzschliff. (Preservation of moist groundwood.) Papier Zeitung 21; 563, 1896.
[7] Barnes, Frederick. Mould growths on wood pulp. Pulp and Paper Magazine of Canada. 18; 995-996. Sept. 23, 1920.
[8] (Humphrey, C. J. and Richards, C. A.) Pulp and pulpwood decay. Preliminary report. American Paper and Pulp Association and U. S. Forest Products Laboratory circular. July 2, 1921.

See Figure 12. Neither napthalene, betanapthol nor cymene when used alone will preserve pulp. Paradichlorobenzene used alone (4 pounds per ton) was very effective in the laboratory tests but has not been tried in a mill.

What Chemicals to Use

Sodium fluoride and combinations of cymene and napthalene with betanapthol or paradichlorobenzene will give more satisfactory results than any of the other chemicals tested as groundwood pulp preservatives.

Sodium fluoride should be used as a general rule at the rate of 16 pounds per ton of air dry pulp. Severe conditions may make it necessary to increase the amount of the salt.

Much smaller amounts of the cymene-napthalene mixtures will give as good results as 16 pounds of sodium fluoride. The following three combinations are recommended. They are given in the order of their effectiveness.

1. Cymene, 4 pounds; naphthalene, 1 pound, and betanaphthol ½ pound on a ton of air dry pulp.
2. Cymene, 4 pounds; naphthalene, 1 pound and paradichlorobenzene, ½ pound on a ton of air dry pulp.
3. Cymene, 6 pounds, and napthalene 1½ pounds on a ton of air dry pulp.

How to Apply these Chemicals

Preservatives may be applied by dripping or spraying the solution or emulsion on the pulp as it is being formed into laps on the wet machine after as much of the excess water as possible has been removed from the pulp. The operator must calculate how much solution is necessary to add in order to obtain the required amount of chemical per ton of air dry pulp.

Sodium fluoride is conveniently applied in a three per cent solution. The application of the cymene-napthalene mixtures is somewhat more difficult than the application of sodium fluoride but their higher toxicity brings the cost down so that it more than counterbalances this difficulty. The napthalene should be dissolved in the cymene and then the betanaphthol or dichlorobenzene added as desired. The naphthalene should be added to the cymene in a closed container in flake or powder form about 24 hours previous to the time it is to be used for it goes into solution slowly. While heating to 50° C. hastens the solution of naphthalene in the cymene it is advisable to avoid the use of heat because of the volatility of the substances used. The other chemicals dissolve readily and may be added shortly before the mixture is to be used.

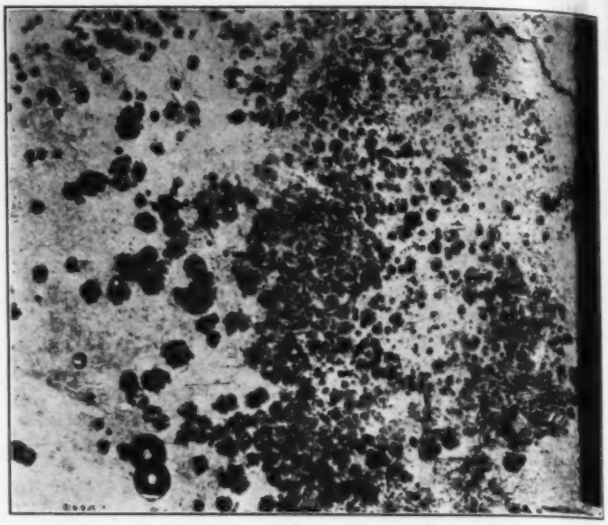

FIG. 8.

Pulp Spotted with Small Dark Brown Spots which are Dyed by a Mold.

Since cymene is only very slightly soluble in water it is necessary to emulsify the mixtures before they can be used. A 3 to 5 per cent solution of rosin size made in the usual manner followed in the mills makes a good emulsifying agent. The alkalinity of the size must not be in excess of 0.07 normal, as excess alkalinity tends to coagulate the emulsion. The cymene-naphthalene mixture should will stand up for several hours. It may be diluted by adding be added slowly to an equal amount by weight of the rosin size

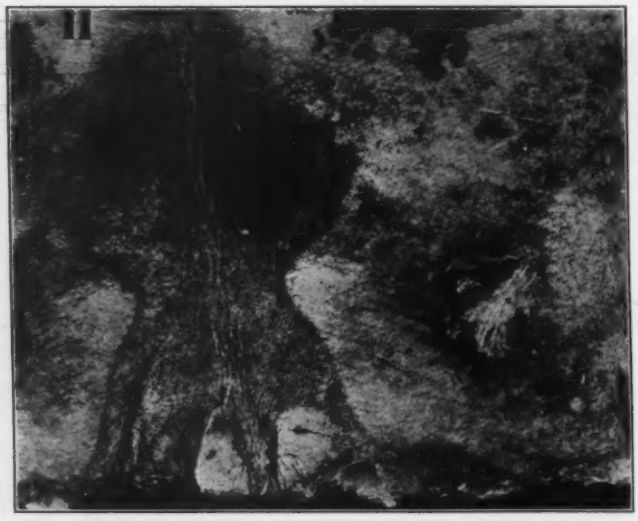

FIG. 7.

Pulp Covered with "Sooty" Spores and (a) the White Mycelium of a Wood-destroying Fungus and (b) a Pinkish Cinnamon Area Caused by a Mold.

FIG. 9.

A Large Area of Pulp Dyed Dark Brown by a Mold.

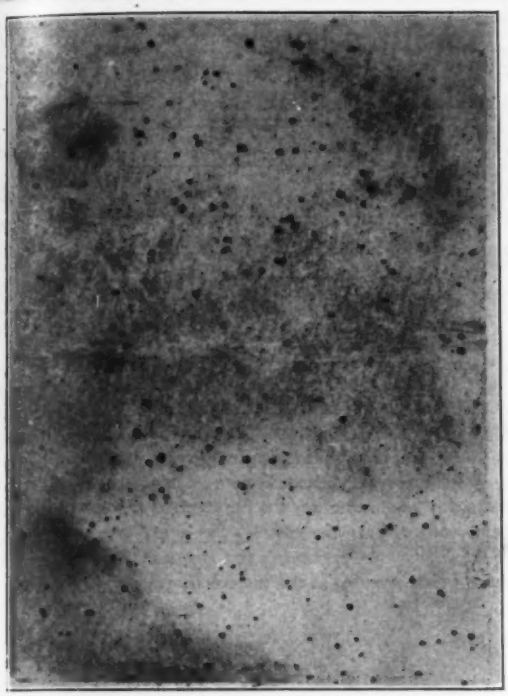

FIG. 10.
Pulp Badly Specked with Small "Brown Spot."

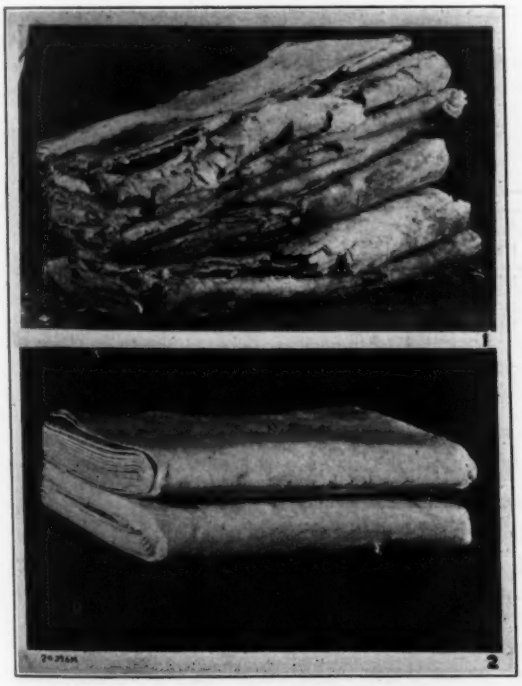

FIG. 11.
(1) Untreated Ground Wood Pulp which had been Stored for Six Months in a Damp Basement. It was Badly Molded and Rotted to Such an Extent that the Margins were Crumbling Off. (2) Ground Wood Pulp which had been Treated with Sodium Fluoride (54.7 Pounds per Ton of Dry Pulp) and then Stored **Two Years in a Pulp Shed where Conditions were Particularly Favorable for Fungus Growth.**

solution and stirred vigorously. The thick emulsion which results enough cold water to make the desired concentration.

Pulp treated with any of these three cymene mixtures should be closely piled as soon as possible after its removal from the wet machine. It should preferably be placed in a pulp storage house, but if it is necessary to pile it out of doors it may be advisable to spray the surfaces of the pile with a three per cent solution of sodium fluoride.

Suggested Apparatus for Application of Preservatives

A simple apparatus for applying chemicals to groundwood pulp is shown in Figure 13. Barrels may be used instead of tanks. All of the pipes should be brass. The chemical is to be mixed with the desired amount of water in the upper tank. A screen, with meshes slightly smaller than the holes in the spray pipes, placed over the pipe opening leading into the lower tank would eliminate all particles which might plug up the holes. The valve in the pipe leading from the upper to the lower tank should be kept closed until after the solution or emulsion is prepared in the upper tank. The preservative is then emptied into the lower tank from which it is distributed by gravity through brass pipes to ½-inch brass pipes perforated with 1/64-inch holes at intervals of ⅜ inch which extend over the layer of pulp on the wet machine just above and slightly back of the press roll. There should be two valves in the pipe leading to the spray pipes at each wet machine. The flow of the chemical may be regulated by the lower valves which, after adjustment, should be left alone. The upper valves should be left open except when it becomes necessary to shut down a machine. It facilitates matters somewhat if the lower tank is provided with

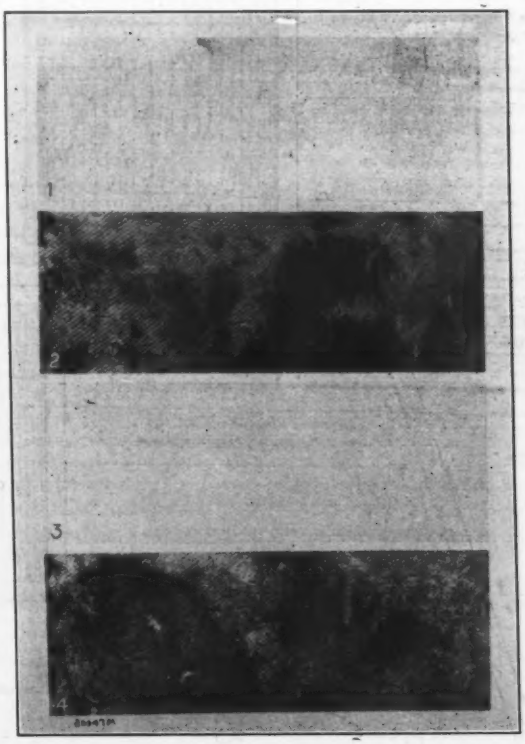

FIG. 12.
Sections of Ground Wood Pulp. (1) Treated with Dry Naphthalene at the Rate of 50 Pounds per Ton of Dry Pulp and Stored 13½ Months in Pulp Shed. Note Clean Condition under Flakes of Naphthalene and Molded Condition Elsewhere. (2) Treated with Cymene at the Rate of 2 Pounds per Ton of Dry Pulp and Stored 10 Months in Pulp Shed. Note Severe Molding. (3) Treated with Cymene and Naphthalene Mixture (50:50) at the Rate of 4 Pounds per Ton of Dry Pulp. Note Perfect Condition. (4) Untreated Stored 10 Months in Pulp Shed. Note the Severe Molding and Decay.

TECHNICAL SECTION, PAGE 171

a float and scale as illustrated in Figure 13. Such an indicator makes it easier to regulate the flow of the liquid. The number of pounds of pulp sprayed with one tank full of the preservative should be determined by experiment and the amount of chemical desired for this amount of pulp mixed in the upper tank with just enough water to fill the lower one.

The Cost of Treatment

The cost of the necessary equipment is very small. One mill constructed similar equipment with tanks large enough to take care of three wet machines for $100.25 including material and labor of construction.

Twelve thousand tons (calculated to air dry weight) of groundwood were treated with 18,000 pounds of sodium fluoride last year at a total cost of $2,281.29 (sodium fluoride $1,906.04, equipment $100.25, labor $275.00) or at an average cost of $1.90 per ton.

The cost of the recommended treatment with sodium fluoride would be as follows:

Sodium fluoride, 16 pounds, at 10½ cents	$1.68
Labor	.25
Total	$1.93

The cost of the cymene-naphthalene mixtures at present prices should not exceed seventy cents per ton. The cost for each of the three mixtures would be approximately as follows in addition to the equipment cost:

1. Cymene—4 pounds at 6¼ cents	$0.25
Naphthalene—1 pound at 3 cents	0.03
Betanaphthol—½ pound at 24 cents	0.12
Rosin size—⅜ pound at 2½ cents	0.01
Labor	.25
Total	$0.66
2. Cymene—4 pounds at 6¼ cents	$0.25
Naphthalene—1 pound at 3 cents	0.03
Dichlorobenzene—½ pound at 18 cents	0.09
Rosin size—⅜ pound at 2½ cents	0.01
Labor	0.25
Total	$0.63
3. Cymene—6 pounds at 6¼ cents	$0.37½
Naphthalene—1½ pounds at 3 cents	0.04½
Rosin size—⅜ pound at 2½ cents	0.01
Labor	0.25
Total	$0.68

Can You Afford Not to Treat Your Pulp?

The cost of proper chemical treatment of pulp is really a payment of insurance against the action of fungi or bacteria. The initial cost of from $0.70 to $1.90 per ton may seem a rather high rate to pay but it is exceedingly low in comparison to the cost of the waste which occurs in untreated pulp. Compare the cost of the treatment with the value of the infected untreated pulp which must be discarded, plus the cost of the extra labor necessary to sort out the good pulp—if there is any—from the infected, and it is easily seen which practice is the most economical.

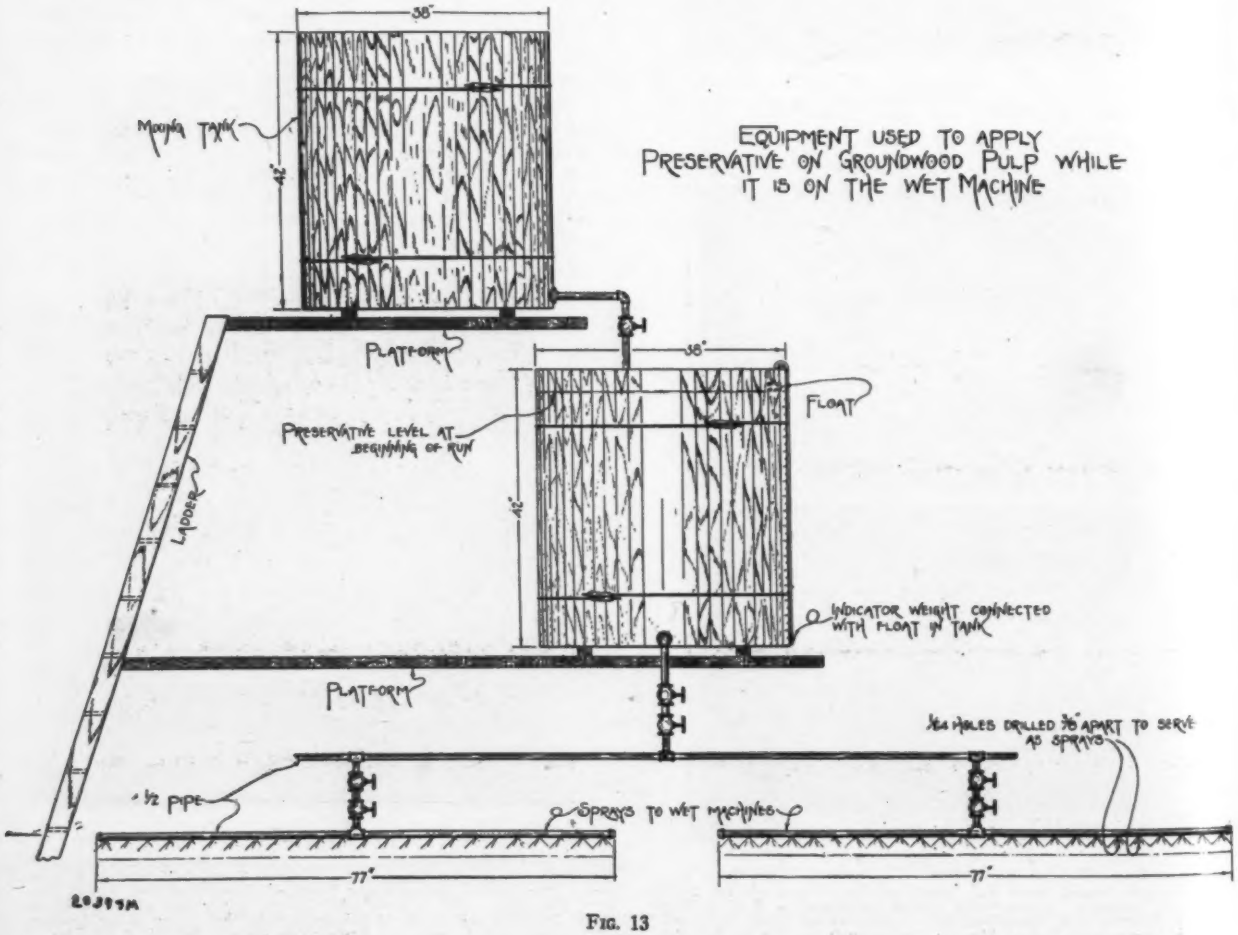

FIG. 13

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

COST CONVENTION AT ERIE, PA., MAY 19 TO 21

The following is an outline of the program arranged for the Cost Convention, to be held at Erie, Pa., on Monday, Tuesday and Wednesday, May 19, 20 and 21.

Monday, May 19

9-11 A. M.—Registration.

11-12 A. M.—Roll call and general introduction of those present, to enable representatives of different mills to be brought into contact with other representatives whom they may wish particularly to meet, in order to discuss mutual problems.

12 o'clock Noon—Buffet luncheon, with address of welcome by President Behrend, or Vice-President Norman Wilson, of the Hammermill Paper Company.

1.30 P. M.—Address by President James A. Reilly. Mr. Reilly will outline the program of the Cost Association for the coming year.

2.00 P. M.—Business Meeting. At this meeting copies of Bylaws and Constitution of the Association will be submitted to those present, and will be carefully examined, with a view of making any changes thought necessary for the better carrying on of the Association's work. It is particularly requested that those intending to attend the Convention should be on hand for this meeting.

The importance of working through groups of manufacturers representing the different products manufactured by the industry, has been thoroughly well recognized by the Association, and in those groups where a sufficient number are present, it is proposed that separate meetings should be held, in order to enable the accountants in each group to get together and formulate a definite policy for the accounting work to be done by their group.

Already very real progress has been made in several groups by this arrangement, and it is hoped that a larger number of groups will be represented at this forthcoming Convention.

Tuesday, May 20

10 A. M.—Alexander Wall, secretary-treasurer of the Robert Morris Associates will speak on the subject of "Ratios, Their Development and Use." Mr. Wall will emphasize the importance to executives of getting reliable information regarding ratios based on figures compiled from returns received from a large number of representative concerns, in their own industry.

At our last Convention Mr. Wall told us of the splendid work which has been done in the rubber industry, along these lines. There is no reason why similar work cannot be done in the pulp and paper industry, and with the co-operation of the mills, the Cost Association hopes this year to be able to do some real constructive work of this nature.

George Fraser of Fraser & Torbet, Chicago, will speak on "Budgets and Their Construction." Mr. Fraser is well known as a forceful speaker, and one who is thoroughly well versed in this subject.

Tuesday Afternoon

will be devoted to a visit to the Hammermill Paper Company's plant. This is one of the most up-to-date mills in the country, and the Hammermill executives have extended a cordial invitation to all those attending the Convention, to go through the mill and study the methods they are using, to get correct costs.

A banquet will be held on Tuesday evening. One speaker will be Mr. Nelson R. Davis of the S. D. Warren Company, president of the Superintendent's Association, who will speak on the subject "Value of Cost Work to Superintendents."

Another speaker will be Mr. Seth L. Bush, manager of research of the Crocker-McElwain Company and ex-president of the Cost Association; also a member of the executive committee.

Mr. Bush will deal particularly with labor problems, their significance and solution, with particular reference to the increase in costs brought about by large labor turn-overs.

Other arrangements are being made by the entertainment committee to make this one of the best banquets ever held by the Association.

On Wednesday, May 21

Morning and afternoon sessions will be held and speakers will include Mr. S. F. Fannon of the Sherman Service, Inc. Mr. Fannon proved such a valuable addition to our speakers at the last Convention, that by particular request he has been secured again for the forthcoming Convention.

Arrangements are now being concluded with three or four other speakers of particular eminence in their line, to make addresses.

The program outlined above is only tentative and subject to alteration.

Fixed Assets Properly Set On Books

The officers of the Association are determined to stress the importance to all mill executives of having their fixed assets properly set up on their books, even though an appraisal may be necessary in order that this can be done. A number of instances have come to light during the year, which have clearly demonstrated the necessity for having such appraisals, if correct costs are to be ascertained promptly, and in time to prove of use to the management.

The slogan adopted for this Convention is "200 at Erie" and in view of the fact that reservations have already been received by the Association, there can be no doubt but that the attendance at this Convention will be considerably larger than it was at the last.

COST SECTION

Superintendents Invited

The Superintendent's Association is to hold its Convention at Dayton, Ohio, on Thursday, Friday and Saturday, May 22, 23 and 24 of the same week. A cordial invitation is extended to all superintendents to first attend the Cost Convention at Erie; those wishing to avail themselves of this invitation will kindly write to the secretary-treasurer of the Cost Association, 18 E. 41st street, New York City.

A similar invitation is also extended to all members of the Technical Association, who will be heartily welcome.

WHEN DOES A TAX ACCRUE*?

By Edward McCarthy.

The question of when a tax accrues is important, not only for the purpose of determining when it should be deducted from taxable income, but also for the purpose of determining invested capital under federal income-tax laws for those years in which the profits taxes apply. The statutory invested capital of a corporation is affected by the payment of dividends within the first sixty days of the taxable year under the revenue acts of 1918 and 1921, and it may also be affected under those acts by the payment of dividends after the first sixty days and under the revenue act of 1917 by the payment of dividends at any time during the taxable year when the amount distributed is in excess of the available current earnings at the date of payment. Article 857 of regulations 45 provides that, for the purpose of ascertaining the amount of current earnings available for distribution, accrued federal income and profits taxes for the taxable year shall first be deducted.

Usual Practice of Income Tax Unit

In computing the amount available for dividends under article 857 of regulations 45, the usual practice of the income-tax unit has been to deduct the income and profits tax on the entire year's income and then to pro-rate the balance in determining the amount available at a particular date. This method is varied when the taxpayer can show that the earnings at the dividend date were in fact greater than the year's income pro-rated. (A. R. R. 2839, Bul. II-16-1003).

It was pointed out in Kixmiller & Baar's "Consolidated U. S. Income Tax Laws" (C. C. H.), p. 906, that the practice of pro-rating the current income and profits tax over a period prior to the passage of the law under which the tax is assessed is open to question. It does not appear, however, that these adjustments of invested capital have been contested in the courts, although they have been contested in the bureau. The practice of the income-tax unit was upheld by the advisory tax board in T. B. R. 54, 1 C. B. 298. In that case a dividend was paid in March 1917, and the board sustained the unit in "accruing" at March, 1917, taxes that were assessed under a law passed five months later. In A. R. R. 2839 (supra), the committee on appeals and review, in referring to the provision in article 857 for accruing taxes on the current year's income, said: "It was admitted at the oral hearing that until this article was changed the unit's action in following it was correct." But did the unit really follow the letter of the regulations?

What Are Accrued Taxes?

The first question is, not whether article 857 is wrong in providing for the deduction of accrued taxes, but, What are accrued taxes, and, When does a tax accrue?

Webster's Dictionary defines the word "accrue" as:

"To come by way of increase; to arise or spring as a growth or result; to be added as increase, profit or damage, especially as produce of money lent."

In 1 Cyc., p. 503, it is:

"To arise; to grow to or to be added to; to occur. In the past tense the word 'accrued' is used in the sense of due and payable; vested; existed."

In 1 C. J., p. 733:

"In the participial form 'accruing' means, resulting, arising; augmenting; becoming due and payable; inchoate, in process of maturing; that which will or may at a future time ripen into a vested right, an available demand or an existing chose in action."

In the case of U. S. vs. Woodard, 256 U. S. 632; 545 U. S. Tax Cases 58; T. D. 3195, 4 C. B. 153; the supreme court said, in deciding whether the federal estate tax could be allowed as a deduction in the 1918 federal income-tax return of the estate:

"Here the estate tax not only 'accrued', which means became due, during the taxable year 1918, but it was paid," etc.

Variously Defined

But to say that an accrued item is a due-and-payable item would probably fail to meet with approval in the accounting profession. It is possible that the word is used by accountants more often in referring to an item which is not due and payable. And this meaning has also been given to it by the courts. (1 C. J. 734) "Accrued" and "accruing" have been variously defined for the purpose of giving effect to various meanings intended by the use of the words in statutes, contracts, etc. It may be safe, however, to say that an accruing liability or expense is one which is arising, growing or coming into existence; and that an accrued liability or expense may be fully accrued, that is, one which has ceased to grow, but is not due, or it may be only partly accrued and still increasing. And it would seem that an accrual must be predicated upon some definite condition or event from which the accrual commences; as interest runs from the date at which the debt is created or the date at which an obligation is specified to bear interest; rent accrues from the commencement of the term or rental period; and salaries and wages accrue when the services are rendered. Even in the definition from Cyc., in which "accruing" is said to mean "inchoate . . . that which *may* at a future time ripen into a vested right," the verb "may ripen" is used, not because there is any doubt about whether the right has commenced to accrue, but because the uncertainty lies in the possibility that a *subsequent* event may happen to prevent the right from vesting. "Inchoate" is defined in Black's "Law Dictionary" as "imperfect; unfinished; begun but not completed." There can be little doubt that, in the common every-day use of the word, an accrual, whether of income or expense, conveys the idea of a right or obligation arising out of and resulting from a fact or condition which went *before*. The idea that "accruing an expense" means to pro-rate it retrospectively, does not seem to be supported by authority.

May Be Set Up Before Annual Assessment

An "accrual" of taxes may be set up before the levy or annual assessment is made; but the justification for calling this an accrual is that the tax is a regular periodic tax, which is reasonably certain, and the amount or rate of the levy can be estimated with reasonable accuracy on the basis of past levies. It appears, however, that some accountants object to calling this an accrual; they say it is a reserve, rather than an accrual. Suppose there is less certainty about the amount of the tax that may have to be paid, and a greater amount is set up than would be warranted solely on the basis of past experience—then there would seem to be less doubt that the amount set up was a reserve for taxes, and not accrued taxes. Or suppose an accountant had been called in on April 30, 1917, to make an audit for a corporation. He presents to the directors a balance-sheet showing a reserve for federal income taxes equal to

*Journal of Accountancy.

50 per cent of the earnings for the preceding four months and makes this explanation: "Gentlemen, you know we declared war last month. That means the government must have a great deal of money. I foresee that in October of this year Congress will repeal the excess-profits law, passed about two months ago, and will enact a new law taxing the incomes of corporations for the entire year as high as 50 and 60 per cent. You must be prepared to meet these taxes. I have, therefore, set up a reserve equal to 50 per cent of your net income."

Would anyone say this was an "accrual"—that these taxes were "accrued taxes?" Such a reserve for taxes would no more be "accrued taxes" than a reserve for unknown disasters impending would be "accrued losses."

But the law is retroactive, it is said. So it is; so also are the state income-tax laws hereinafter cited. A retroactive law attaches new legal consequences to precedent facts. It does not change the facts. To conceive of effect as preceding cause does violence to the first principle of logic.

A Manifest Inconsistency

There is a manifest inconsistency on the part of the bureau in allowing federal income and profits taxes to be included in invested capital for a part of the following year, under T. D. 2791, and, on the other hand, holding that this fund is now available for the payment of dividends in the current year. The advisory tax board questioned the soundness of T. D. 2791, in T. B. R. 17, 1 C. B. 294. But it may well be asked if T. D. 2791 is not more sound than the accrued-tax provision of article 857. Why should not federal income and profits taxes be treated as dividends are treated under article 858—that is, as affecting invested capital only when they are due and payable and not even then if the earnings of the year in which the tax is payable are sufficient to pay it? The tax comes out of the earnings or surplus of the corporation; it has been called "Uncle Sam's dividend;" in the words of T. B. R. 17 (supra) "it is a sharing of the government in the income of the taxpayer for the taxable year." In a well reasoned article by Charles F. Seeger, appearing in a recent issue of "The Journal of Accountancy," the conclusion was reached that income taxes are a distribution of profits and not expense.

The conclusion reached in T. B. R. 17 (supra) was that article 845 of regulations 45 should not be modified. Article 845 was later modified, however, by T. D. 2931—article 845—(a). This conclusion of the advisory tax board was based on the proposition that "the amount of these taxes for any year cannot, therefore, after conclusion of such year, be considered as a part of surplus, but is rather in the nature of a liability." In support of this proposition a "single illustration" is used to show that the taxes are "chargeable" against the income upon which they are computed. But the tax board's illustration is beside the point. The question, under either article 845 or article 857, is not what income the taxes are "chargeable" against, but *when* they are chargeable. In other words, *when* does a tax accrue?

Tax Not a Liability

The bureau of internal revenue has repeatedly held that a tax is not a liability *and cannot accrue before the passage of the law under which it is assessed.* In those cases involving the accruability of state income taxes, the bureau has refused to allow as a deduction the state income taxes under a law passed after the close of the taxpayer's federal taxable year. O. D. 505, 2 C. B. 121, N. Y. income tax; I. T. 1498, 1-2 C. B. 95, S. C. income tax; O. D. 1118, 5 C. B. 133, Wisconsin additional surtax; O. D. 387, 2 C. B. 116, Wisconsin bonus tax.

The Wisconsin bonus-tax law was passed in 1919, imposing a tax on 1918 income. A federal taxpayer sought to deduct the amount of this tax in a return for the year 1918 as a tax accrued in 1918. The bureau of internal revenue refused to allow the deduction. The case was carried to court. The district court gave a decision for the government. Appeal was taken to the circuit court of appeals (*Ed. Schuster & Co. vs. Williams Collector,* 283 Fed. 115; 545 U. S. Tax Cases 974; T. D. 3330, I-1 C. B. 133) and that court held that the tax did not acrue in 1918, saying "it did not accrue until it became a liability," and citing the case of *U. S. vs.* Woodard (supra).

An Interesting Case

It is interesting to note that, in an Iowa case (*Overland Sioux City Co. vs. Clemens,* 179 *N. W.* 954; 545 *U. S. Tax Cases* 387) the opinion of the state court concerning the retroactive effect of the federal income-tax law is in harmony with the opinion of the federal court in the Schuster case (supra), concerning the retroactive effect of a state income-tax law. In the Iowa case the corporation paid a dividend July 1, 1917, out of its earnings for the preceding six months, leaving a surplus balance which was not sufficient to meet the payment of federal income and excess-profits taxes assessed under the revenue act of October 3, 1917, on net income of the six months ending June 30, 1917. Immediately after the dividend was declared and paid the stock of the corporation was sold by Clemens to another. Recovery was sought against Clemens on the theory that the tax was a liability as of June 30, 1917; that the profits and surplus were overstated in the books; and that the dividend was paid in ignorance of the tax and under mistake. This is just such a case as the advisory tax board had in mind when T. B. R. 17 (supra) was issued.

What the Iowa Court Said

Here is what the Iowa court said:

"But was the dividend or any part of it illegal? No one will so pretend unless it was rendered so by the act of October 3, 1917. That act did not undertake to undo anything which had gone before. . . . It did not require the payment of the excess profits tax exacted from any specified fund or the income of any particular period. . . . Counsel have argued as though the tax must have been paid from the earnings of the company prior to July 1, 1917.

"The act contains no such requirement, and as the tax was not payable until nearly a year later, there would be no ground for such inference. . . . For all that appears the company's earning capacity may have continued as before and have been ample out of which to discharge the tax long before it became payable. . . . As indicated, the act was not retrospective, save as including the income of the calendar year prior to October 3 with that portion following, in making up the net income on which the taxes would be levied and collected, and cannot be considered to have affected in any manner the legality of the dividend or sale of stock."

Our question, When does a tax accrue? has therefore been answered for us by the courts and by the bureau of internal revenue itself, and it seems clear that the income-tax unit should change its practice in applying article 857, and equally clear that it can do so and still keep strictly within the letter of the regulations.

How about the regulations? If federal income and profits taxes are the government's share of the profits, why not treat them the same as dividends—the stockholders' share of the profits?

For the purpose of *collecting the tax,* of course, the government is a creditor, and the tax, a liability, or, as has been said, "both are of a higher nature." But for the purpose of *determining the income,* the government is a partner sharing in the profits, and the government's share of the profits is not allowed as a deduction from income. Why, then, should not invested capital be determined on the same theory? So long as a corporation is able to meet its federal tax payments when they fall due, why should it not be allowed to use its current earnings as it sees fit? Congress undoubtedly intended that it should be allowed to do so. The provision for paying the 1917 tax June 15, instead of when the return was filed, and the provision in the 1918 law for paying the tax in four instalments are obviously not designed for the convenience of the government, but for the convenience of the taxpayer.

COST SECTION

REPORTS THAT REPORT

An Outline of the Need and Preparation of Reports From the Departments of a Large Concern

Some executives' desks are cluttered, their files choked with useless departmental reports. And yet well-organized monthly departmental reports are constantly saving managers and presidents hours of labor and energy and thousands of dollars. Unless they are of real service and emphasize outstanding facts of value to the management they are a waste of time, money, and energy.

Investigation indicates that little or no constructive business building information can be gathered from many departmental reports because department heads make the mistake of thinking that a mass of detailed facts and figures are necessary in a report made to an executive. As a matter of fact, the executive is interested more in a summary of detailed data or in the conclusion arrived at after the mass of detail has been analyzed, than he is in the details themselves.

Interested in Results

The executive is primarily interested in results and in the effect of certain factors upon his business. He is more interested in the results than he is in the factors themselves. Definite methods will bring out clearly the factors desired.

One essential of every report to an executive is brevity—not brevity for the sake of briefness, but brevity for the sake of clearness. Let the sentences be short; let the figures be grouped clearly. Make every word count; be sure the important figures are not dwarfed by detail items. Short paragraphs are easier to read than long ones and much more effective. Where figures are an important part, line them up so the eye follows them easily and arrange them so that those in which the executive is most vitally interested will stand out as if they had a pennant flying over them.

Graphic presentation of facts often affords the executive a quick and thorough understanding of the principles and facts covered by the report. For that reason tabulation, charts, and graphs should be used to emphasize any information that can be graphically presented. This is especially the case when indicating the gradual development of a given operation or related results, such as cost figures, production reports, or sales records. Graphs and figures are helpful to executives because the eye is brought into play and quickly "senses" danger signals or recognizes favorable indications. This is explained by the fact that most executives are "eye-minded."

The Ideal Report

The ideal report starts out with a brief statement of the subject under consideration, followed by a summary of findings and conclusions. By glancing over the first few paragraphs the executive forms an immediate impression of the operations of that particular department for the period in question. If the conclusions arrived at in the report show up all vital factors involved there is no need for the executive to wade through the mass of detailed facts, figures and statements from which these conclusions were drawn. In comparing one departmental report with another the executive may find it necessary to refer to the detail data upon which the reports were drawn. For that reason summaries or conclusions should always be supported by the facts on which they are based. These facts should be supported by the specific evidence and actual figures as drawn from the records of the departments.

Quick Reference

Every report to an executive should be so organized that quick reference can be made to any part of it. If the report is lengthy, a separate index page may be very useful. For instance, in the summary, references should be made to the page, table, or paragraphs that are used as a basis for the statement made in the summary.

In the preparation of a report the employe should always keep foremost in mind the purpose for which the report is intended.

Special emphasis should be placed upon the extraordinary and the exceptional, rather than upon the normal conditions

No two departmental reports will be drawn up exactly alike, or according to the same general outline. The reports covering one period may be wholly unlike a report for the same department covering another period. It is practically impossible to give any outline or fixed form in which a departmental report should be drawn up. For this reason, only the general fundamental principles can be pointed out.

Report Must Be Plain

The executive for whom the report must be prepared is undoubtedly a man whose time is valuable. The report must be prepared in such a way that he can grasp the information in it with the least possible effort and in the least possible time.

In order to have the business operate successfully it is necessary that it be properly co-ordinated. Co-ordination of the various departments cannot be brought about unless the directing head is fully informed.

Reports form the best basis upon which a manager can make an intelligent estimate of the controllable and uncontrollable factors of his business. They offer the best method by which he can sense the need of changes and direct the installation of newer and better methods of operation.

Tax Waivers

Attention is called to H. R. 6901, which was passed by Congress on March 13, 1924. In effect, this law provides as follows:

1—A domestic corporation which filed a waiver for 1917 on or before April 2, 1923, if such waiver was accepted by the Commissioner, may file claim for refund for 1917 on or before April 1, 1925.

2—A domestic corporation which filed a waiver for 1918, or files the same on or before June 15, 1924, if such waiver was or is accepted by the Commissioner, may file claim for refund for 1918 on or before April 1, 1925.

3—There is no ruling upon the question whether the time for filing claims for refund for 1918 was extended by the Mimeograph extending the time for filing the completed 1918 return.

4—In any case, of course, a claim for refund may be filed within two years from the time the tax was paid.

There is no ruling upon the situation presented where the waiver was not accepted by the Commissioner, but we feel that if a taxpayer properly executes and files the waiver within the time prescribed, the Commissioner will accept it. Any other policy would not be a fair one; that is, if the Commissioner accepted all waivers where additional taxes were found due, as has been the practice in the past and unquestionably will be the practice in the future, he should also accept a waiver where a refund may result.

May Run W. F. Whiting for Congress

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., April 29, 1924.—Strong advocacy of William F. Whiting of the Whiting Paper Company for representative from this district to Congress was voiced last week at a luncheon at Westfield by Atty. Harry B. Putnam who said that the time had come when men of his stamp should be elected and his entrance into the field would be a move of the near future. There were 32 leading republicans of the section present and the solid support of the party in Westfield was pledged. Mr. Whiting will be elected a district delegate to the Republican National Convention today.

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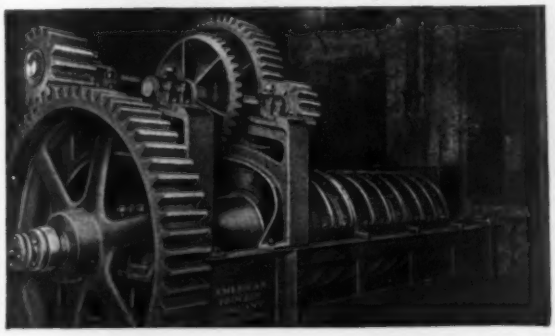

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A Payroll Leakage

In the course of a recent audit we observed that certain piece workers were being paid on their own count.

There was no check-up and the channel for leakage from the yearly payroll of $225,000 was wide open.

We pointed out a simple way to correct the trouble and our plan was put in effect at once.

That service was valuable but we threw it in for good measure. Sometimes even our first interview leads directly to an important saving. Why not talk with us?

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SEND FOR SAMPLES AND PRICES

New York Trade Jottings

F. H. Chase of Daniel M. Hicks, Inc., 200 Fifth avenue, returned to his desk this week after a few days' illness.

* * *

Katzenstein & Keene, Inc., have moved their offices from 200 fifth avenue to 50 Church street. Their telephone is Cortlandt 7365.

* * *

J. E. Myers has resigned as manager of the International Paper Company's specialty mill, known as the "Fall Mountain mill," at Bellows Falls, Vt.

* * *

The American Paper Mills Corporation, Eleventh avenue and 27th street, is now listed under a series of new telephone numbers. They are Chickering 1600, 1601, 1602, 1603, 1604 and 1605.

* * *

At the annual meeting of the International Paper Company, H. C. Phipps was elected a member of the board of directors for three years, succeeding Herman Elsas, who retired. Ogden L. Mills was elected for two years and Owen Shepherd for one year.

* * *

Otto J. Goeppinger, formerly maintenance engineer for the Kimberly-Clark Company, and for the past two years engineer in charge of the American Voith Contact Company, of 280 Madison avenue, is now associated with the Armstrong Machine Works of Three Rivers, Mich., as sales engineer.

* * *

A special three letter code book has been invented and patented by Bernard Sharp of the Great Eastern Paper Company, Inc., 303 Fourth avenue. It simplifies the sending of cables by the use of a three letter code which covers every term used in connection with the sizes, weights and orders for paper.

* * *

A pleasing event of Paper Industry week was a dinner given by Daniel M. Hicks, Inc., on the evening of April 9 at the Hotel Pennsylvania. The company entertained about thirty of their mill friends. A fine orchestra furnished music while the dinner was being served and a superior vaudeville entertainment was given afterwards. It proved a most enjoyable occasion for all who were fortunate enough to be in attendance.

* * *

The Royal Card and Paper Company, 132-136 West 14th street, has opened a Sales office at 20 Clinton street, Newark, N. J. The office is in charge of Samuel Feinblatt and the telephone is Market 4321. This office will be a convenience for the printing and allied trades in New Jersey, giving better service and attention to orders and inquiries which have previously been handled directly from the New York office. A complete line of samples and full information on all of the company's stock and mill lines will be available at the office in Newark.

HUMAN FACTOR IN PAPER MAKING

(*Continued from page* 44)

only a competent and versatile mlll superintendent can decide.

His progress from superintendent to mill owner, was made possible by a continued use of the methods that made it possible for him to jump from machine tender to Superintendent, ambition, observation, thought and study of all details connected with the business, so when the opportunity arrived to progress further, he was ready.

Today his mill is operating on a slightly different schedule than most mills do. The skilled men are given every chance to improve their knowledge of paper making. No one stands between them and those in authority. Better men and machine tenders are responsible for all colors and qualities of paper. They have been taught how to judge these qualities and how to keep them uniform. Customers' complaints are thoroughly discussed, and if just, the cause is traced down, and every man in the plant knows what it was and what it cost, and how best to avoid it in the future.

Trying to Develop Men

The great idea back of the system used in this mill, is to develop men capable of carrying on the art of paper making in a worthwhile way. When a new man or boy is taken into the mill, it is because the men who engage him feel that he has the faculties that can be trained into making him a real paper maker. No man in this plant is afraid to ask questions, or confess ignorance if he bumps into a problem not met before. He knows the desire of the management to seek perfection, and quickly calls their attention to anything that may affect adversely the quality or uniformity of the product. It is natural to expect such a mill to show progress, it could hardly do otherwise.

The men employed in this organization do not have to await promotion in it; they are urged to seek better jobs or promotion in other mills, and will always have the support of their present employers, who realize that training such men and having at all times their complete cooperation in all things, is sufficient recompense for the pleasure in giving to the trade, men who will care for its future. If more mills would give the subject of making paper makers as much thought as is devoted to machines and making paper, the industry would undoubtedly experience its greatest advance possible under present day conditions.

There are unquestionably enough of earnest, ambitious and intelligent young men in the trade, who are seeking the ways of development and promotion. These men should be found when positions are vacant. The third hand of today, may be the future Superintendent if he is given the proper attention. There is no school of paper making that can compare with the actual work in the mill, and attainable results by proper interest and instructions to the ambitious employees, will more than give an acceptable return for the time, work, and patience expended in securing results that are earnestly sought for by paper manufacturers.

To Sell Lime Sludge to Farmers

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., April 28, 1924.—Approximately 10,000 tons of lime sludge, required by farmers to neutralize the acid in their soils, will be available at the Wausau Sulphate Fibre Company plant at Mosinee, Wis., in the spring, according to J. C. Justesen, traffic manager for the company, who is urging farmers to make use of this opportunity to obtain fertilizer at a nominal cost. Last year about 50 carloads of lime sludge was shipped from the plant and more than 500 truckloads were hauled away by farmers.

Tariff Report on Casein

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 28, 1924.—The supplemental report of the Chemical Division of the Tariff Commission on casein has just been approved by the Advisory Committee of the Commission. The report will now be placed before the commissioners themselves, and as soon as it has been acted upon date for supplemental hearings will be announced by the Commission.

Government Paper Bids

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 30, 1924.—The Government Printing Office has received the following bids for 3,600 lbs. blue glazed bond paper, 22 x 34"—18 lbs. No. 9:

American Writing Paper Company, $.23 per lb.; Barton, Duer & Koch Paper Company, $.257, and Old Dominion Paper Company, $.2498; Whiting-Patterson Company, Inc., $.308; Reese & Reese, $.23395; Whitaker Paper Company, $.2275; Dobler & Mudge, $.26.

Write for monograph V-6, "Property Records — Their Effect on Profit and Loss."

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There are American Appraisal representatives located in 21 of the larger cities to aid in analyzing your problems along these lines:

1. To show wherein plant accounts may or may not reflect original costs or current values; to suggest a basis for securing a proper recognition of "plant and equipment" as an asset factor with bankers.
2. To outline plans for accurately establishing depreciation and obsolescence as a part of overhead charged to manufacturing costs.
3. To determine whether or not existing methods of handling plant accounts lead to inequities in taxes.
4. To suggest a trustworthy basis for bringing property values into agreement with insurance requirements and forms, and for maintaining this agreement to eliminate avoidable losses.
5. To illustrate the application of appraisal service to the most modern practice of property account control, card systems, equipment ledgers, etc.
6. To outline practical methods for departmentalizing property for cost accounting purposes.
7. To draw concise and simple specifications for An American Appraisal that will meet in the most practical manner a given set of property control and property valuation problems.

Ask us to have one of them call.

TEN years ago it was considered conservative practice to provide reserves for depreciation high enough to permit a company's land, buildings and equipment to be valued at one dollar in the company's statement.

Today this practice, or anything resembling it, is generally regarded as radical and erroneous.

It is prohibited by present revenue laws. It makes impossible a correct accounting of property or an accurate statement of earnings.

There is therefore a widespread realization that no more than the year's depreciation should be taken out of the year's income.

An American Appraisal is The Authority for determining depreciation accurately and provably.

An American Appraisal assures accuracy, disinterestedness and provability in property analysis and valuation.

A generation of experience supports its statements of values, depreciation and depletion.

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An American Appraisal

THE AUTHORITY

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Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING APRIL 26, 1924

SUMMARY

News print.....216 rolls
Printing paper.....158 cs., 287 bls., 48 rolls
Hangings.....10 pgs., 67 bls., 3 cs.
Wall paper.....22 bls., 24 cs., 421 rolls
Filter paper .....116 bls.
Packing paper.....3,885 rolls, 45 cs., 12 bls.
Wrapping paper..651 rolls, 385 pgs., 47 bls., 8 cs.
Kraft paper.....1,895 rolls, 109 bls.
Drawing paper.....6 cs.
Cigarette paper.....2,883 cs.
Tissue paper .....48 cs.
Surface-coated paper.....270 cs.
Colored paper .....2 cs.
Writing paper .....78 cs.
Metal paper.....7 cs.
Litho paper.....60 cs.
Glazed paper.....10 cs.
Miscellaneous paper....162 cs., 2,075 rolls, 389 bls.

CIGARETTE PAPER

American Tobacco Co., Sarcoxie, Bordeaux, 1,300 cs.
R. J. Reynolds Tobacco Co., Sarcoxie, St. Nazaire, 1,360 cs.
De Manduit Paper Corp., by same, 217 cs.
Max Spiegel & Sons, Pittsburgh, Southampton, 6 cs.

FILTER PAPER

J. Manheimer, Pittsburgh, Bordeaux, 116 bls.

NEWS PRINT

Street & Smith Corp., Pittsburgh, Hamburg, 153 rolls.
Chemical Nat'l Bank, by same, 63 rolls.

PRINTING PAPER

E. H. Bailey & Co., Celtic, Liverpool, 40 cs.
B. F. Drakenfeld & Co., by same, 39 cs.
P. C. Zuhlke, Samland, Antwerp, 50 cs.
Import Paper Co., Mongolia, Hamburg, 183 bls.
J. H. Scott Paper Co., Orduna, Hamburg, 104 bls.
J. H. Scott Paper Co., by same, 48 rolls.
B. F. Drakenfeld & Co., Baltic, Liverpool, 27 cs.
Oxford University Press, by same, 2 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Baltic, Liverpool, 10 pgs.
A. C. Dodman, Jr., Inc., by same, 3 bls.
A. C. Dodman, Jr., Inc., Scythia, Liverpool, 11 bls.
A. C. Dodman, Jr., Inc., Franconia, Liverpool, 25 bls.
W. H. S. Lloyd & Co., Minnewaska, London, 14 bls.
W. H. S. Lloyd & Co., by same, 2 cs.
W. H. S. Lloyd & Co., American Farmer, London, 1 cs.
W. H. S. Lloyd & Co., by same, 14 bls.

WALL PAPER

A. C. Dodman, Jr., Inc., Franconia, London, 16 bls.
A. C. Dodman, Jr., Inc., by same, 3 cs.
Whiting & Patterson, by same, 19 cs.
A. C. Dodman, Jr., Inc., Samland, Antwerp, 2 cs.
A. C. Dodman, Jr., Inc., by same, 3 bls.
The Prager Co., Rotterdam, Rotterdam, 421 rolls.
F. J. Emmerich, Baltic, Liverpool, 3 bls.

SURFACE COATED PAPER

P. C. Zuhlke, Samland, Antwerp, 183 cs.
Gevaert Co. of America, by same, 13 cs.
Globe Shipping Co., Bremen, Bremen, 74 cs.

PACKING PAPER

Steffens, Jones Co., Orduna, Hamburg, 6 cs.
Corn Exchange Bank, Kungsholm, Gothenburg, 3,885 rolls.
Chase Nat'l Bank, by same, 12 bls.
Steffens, Jones Co., Mongolia, Hamburg, 11 cs.
Import Paper Co., Rotterdam, Rotterdam, 9 cs.
F. C. Strype, by same, 5 cs.
Steiner Paper Co., by same, 14 cs.

WRAPPING PAPER

F. C. Strype, Samland, Antwerp, 8 cs.
F. C. Strype, by same, 1 roll.
Chemical Nat'l Bank, Orduna, Hamburg, 385 pgs.
C. K. MacAlpine & Co., Kungsholm, Gothenburg, 650 rolls.
C. K. MacAlpine & Co., Kungsholm, Gothenburg, 47 bls.

KRAFT PAPER

R. F. Hammond, Inc., Bremen, Bremen, 341 rolls.
Fernstrom Paper Co., by same, 109 bls.
Street & Smith Corp., Orduna, Hamburg, 170 rolls.
Traders Paper Co., by same, 120 rolls.
Gilson Bros. Co., Pittsburgh, Hamburg, 814 rolls.
Gilson Bros. Co., Mongolia, Hamburg, 450 rolls.

METAL PAPER

Hensel, Bruckman & Larbacher, Reliance, Hamburg, 7 cs.

COLORED PAPER

P. H. Petry & Co., Reliance, Hamburg, 2 cs.

TISSUE PAPER

F. C. Strype, Baltic, Liverpool, 19 cs.
Meadows, Wye & Co., Franconia, Liverpool, 25 cs.
Standard Products Mfg. Co., by same, 4 cs.

DRAWING PAPER

Devoe & Reynolds Co., Minnewaska, London, 6 cs.

LITHO PAPER

Martin & Bechtold, Pr. Hayes, Hongkong, 60 cs.

WRITING PAPER

Japan Paper Co., La Savoie, Havre, 2 cs.
American Shipping Co., Eclipse, Hamburg, 76 cs.

GLAZED PAPER

Richardson Bros., Celtic, Liverpool, 10 cs.

PAPER

Japan Paper Co., Duilio, Genoa, 48 cs.
J. R. Livermore, Inc., by same, 7 cs.
J. H. Scott Paper Co., Orduna, Hamburg, 144 rolls.
Wilkinson Bros. Co., Inc., by same, 263 rolls.
H. Reeve Angel & Co., Inc., Kungsholm, Gothenburg, 4 cs.
Wilkinson Bros. Co., Inc., by same, 1,078 rolls.
Wilkinson Bros. Co., Inc., by same, 192 bls.
M. M. Cohen, by same, 175 bls.
M. M. Cohen, by same, 24 rolls.
Arkell Safety Bag Co., by same, 553 rolls.
E. H. Sergeant Co., by same, 13 cs.
R. Wilson Paper Corp., Columbia, Glasgow, 58 cs.
R. Wilson Paper Corp., by same, 13 rolls.
Keuffel & Esser, Rotterdam, Rotterdam, 5 cs.
M. O'Meara Co., Reliance, Hamburg, 9 bls.
W. Hartman & Co., by same, 13 bls.
P. H. Petry & Co., by same, 22 cs.
P. H. Petry & Co., Mongolia, Hamburg, 5 cs.

RAGS, BAGGING, ETC.

E. J. Keller Co., Inc., Capetown Maru, Leghorn, 200 bls. rags.
E. J. Keller Co., Inc., Elkton, Hamburg, 125 bls. rags.
E. J. Keller, Lucia, Trieste, 559 bls. rags.
E. J. Keller Co., Inc., by same, 99 bls. jute waste.
E. J. Keller Co., Inc., Cleveland, Hamburg, 43 bls. rags.
L. H. Abenheimer, Franconia, Liverpool, 143 bls. bagging.
Brown Bros. & Co., Boston City, Bristol, 65 bls. waste paper.
National City Bank, by same, 137 bls. rags.
American Exchange Nat'l Bank, by same, 195 bls. rags.
American Exchange Nat'l Bank, Bremen, Bremen, 171 bls. rags.
North German Lloyd, by same, 26 bls. rags.
Guaranty Trust Co., by same, 117 bls. rags.
Brown Bros. & Co., Columbia, Glasgow, 72 bls. paper stock.
E. J. Keller Co., Inc., Samland, Antwerp, 119 bls. flaxwaste.
E. J. Keller Co., Inc., Francisco, Antwerp, 616 bls. rags.
Equitable Trust Co., by same, 21 bls. rags.
W. Schall & Co., by same, 76 bls. paper stock.
W. Schall & Co., by same, 52 bls. thread waste.
E. J. Keller Co., Inc., Eclipse, Hamburg, 65 bls. rags.
Chase Bag Co., by same, 105 bls. jute waste.
Darmstadt, Scott & Courtney, by same, 27 bls. rags.
A. W. Fenton, Inc., by same, 42 bls. rags.
W. Hughes & Co., by same, 29 bls. rags.
Whiting Waste Products Co., Inc., by same, 87 bls. rags.
L. H. Abenheimer, by same, 127 bls. rags.
Guaranty Trust Co., by same, 723 bls. rags.
Goldman, Sachs & Co., Sarcoxie, St. Nazaire, 75 bls. rags.
E. J. Keller Co., Inc., by same, 199 bls. rags.
P. Berlowitz, by same, 43 bls. rags.

OLD ROPE

E. J. Keller Co., Inc., Eclipse, Stockholm, 44 coils.
E. J. Keller Co., Inc., Lucia, Trieste, 77 coils.
Brown Bros. & Co., Boston City, Bristol, 332 coils.
Brown Bros. & Co., Samland, Antwerp, 61 coils, 92 bales.
Brown Bros. & Co., Rotterdam, Rotterdam, 301 coils.
Brown Bros. & Co., Sarcoxie, St. Nazaire, 106 coils.
Ellermans-Wilson Line, Francisco, Hull, 42 coils, 21 bales.

WOOD PULP

E. M. Sergeant Co., Bergensfjord, Kristiania, 120 bls. chemical pulp.
Pagel, Horton & Co., Inc., Kungsholm, Gothenburg, 2,500 bls. chemical pulp.
Johaneson, Wales & Sparre, Inc., by same, 150 bls. sulphate pulp.
Johaneson, Wales & Sparre, Inc., by same, 1,050 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., by same, 167 bls. sulphite pulp.
E. M. Sergeant Co., by same, 508 bls. sulphite pulp.
Castle & Overton, Bremen, Bremen, 1,235 bls. wood pulp.
Tidewater Papermill Co., Barnholm, Liverpool, N. S., 12,421 bls. wood pulp.

CHINA CLAY

J. Lee Smith Co., Boston City, Bristol, 200 bags.
C. T. Wilson Co., Inc., by same, 334 bags.
Bankers Trust Co., by same, 300 bags.
C. B. Richard & Co., by same, 100 casks.

CASEIN

Kalbfleisch Corp., Western World, Buenos Aires, 3,502 bags.

PHILADELPHIA IMPORTS

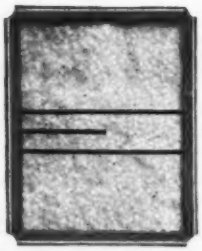
WEEK ENDING APRIL 26, 1924

E. J. Keller Co., Inc., Luxpalite, Genoa, 83 bls. cotton waste.
New York Trust Co., by same, 67 bls. rags.
A. Brown & Sons, Sarcoxie, St. Nazaire, 127 bls. rags.

(Continued on page 70)

Main aisle in one of the Weave Rooms

Where Scientific Precision has Replaced Guesswork



You will recognize Hamilton felts by two blue lines running the full width of the felt with one shorter blue line between them.

IN such a process as the production of felts for paper mills absolute control of the processes, accurate to the last detail is essential to success.

Hamilton felts are made under such control. We know the precise contents of every solution; the exact degree of heat in every dryer; the nature of the fibre we are handling and the proportion of the mixtures.

This modern precision has come to the aid of a practical experience running back 66 years. It has made possible products like the Hamilton A plate felt—a boon to hundreds of paper makers.

The demand of paper makers for this felt has astonished us. Every month it grows noticeably greater—and once a mill has used A Plate felts it keeps ordering more! Hamilton felts are made for every paper mill use.

Let our service men help with your felt troubles whether you are now using Hamiltons or not.

SHULER & BENNINGHOFEN
Miami Woolen Mills

Founded 1858 Hamilton, Ohio

Hamilton Felts

Imports and Exports of Paper and Paper Stock

(*Continued from page 68*)

Waste Material Trading Corp, by same, 77 bls. rags.
Salomon Bros. & Co., by same, 140 bls. rags.
E. J. Keller Co., Inc., by same, 127 bls. rags.
Brown Bros. & Co., Sarcoxie, Bordeaux, 800 bls. rags.
Castle & Overton, by same, 445 bls. rags.
Castle & Overton, Manchester Merchant, Manchester, 160 bls. rags.
Castle & Overton, Galtymore, Scotland, 87 bls. rags.
Castle & Overton, Elkton, Germany, 63 bls. rags.
Castle & Overton, F. Bulow, Germany, 455 bls. rags.
Castle & Overton, Eastern Dawn, Rotterdam, 64 bls. rags.
E. J. Keller Co., Inc., Breedyk, Rotterdam, 259 bls. rags.
Lagerloef Trading Co., Puget Sound, 3,456 bls., 553 tons chemical.

BALTIMORE IMPORTS

WEEK ENDING APRIL 26, 1924

E. J. Keller Co., Inc., Kalsuren, Gothenburg, 671 bls. wood pulp.
A. Brown & Sons, R. Dollar, Marseilles, 135 bls. rags.
Johaneson, Wales & Sparre, Inc., Kungsholm, Gothenburg, 2,250 bls. sulphite pulp.

NEW ORLEANS IMPORTS

WEEK ENDING APRIL 26, 1924

Castle & Overton, De La Salle, France, 437 bls. rags.
Castle & Overton, by same, 48 bls. waste paper.

BOSTON IMPORTS

WEEK ENDING APRIL 26, 1924

C. K. MacAlpine, Breedyk, Rotterdam, 48 bls. printing paper.

CONDITIONS IN PHILADELPHIA

(*Continued from page 40*)

with the Keystone Paper Mills of Upper Darby. He was forty years of age.

News Notes of Trade Interest

Samuel Dubin, proprietor of the former Bridge Paper Company, coarse paper dealers, located at 1226 N. 10th street, who last year was involved in involuntary bankruptcy proceedings, has been granted a discharge by the local U. S. District Court.

Daniel I. Murphy, founder of the Daniel I. Murphy Company, who recently retired from that paper stock firm upon its incorporation, and who has been spending the winter in Florida, has returned to headquarters.

The Seaman Paper Company has added two new papers to its lines and these are now being distributed through the local territory by the Philadelphia representative, Manager William S. Pringle. They are the Diatex, a ground wood, super calendar and the Diapaque, a ground wood M. S., both in white.

The Whitaker Paper Company, formerly located in the Bourse Building where sales offices were established upon the sale of the local warehouse and stocks to the Garrett-Buchanan Company, has removed to 1521 N. Redfield street, where Manager R. Tustin, will supervise the local distribution from his residence.

C. Ralph Myers, formerly with the Raymond and McNutt Company is now associated with the Charles Beck Paper Company, 609 Chestnut street and will cover the printing trade.

Word was received from Edward D. Hemingway, head of the Hemingway Company, paper stock dealers, 820 N. Hancock street, of his arrival in London, England, and acknowledging the receipt of the cablegram from Manager Harry Bailey, informing him of the death of his father, who died last week. Mr. Hemingway plans to remain in Europe for some time acording to advices to headquarters.

Great Northern's Hydro-electric Plant

The outstanding new construction work in the Maine paper trade during the year 1923 was the building of a fine modern hydro-electric plant of the Great Northern Paper Company at Anson, Me., for the Madison, Me., mill of the company. Anson is on the west side of the Kennebec River, directly opposite Madison, on the east side.

For a long time, the old hydraulic development of the Great Northern at Madison had been inadequate. The development was not sufficient in capacity and very inefficient in utilizing the water supply. The need for an extensive and enlarged improvement had been manifest to the officials of the company and a decision was made to proceed with the erection of a new power plant more than a year ago.

The plant, which was completed late in 1923, meant a vast amount of work, an average of 500 men being employed continually. It was necessary to excavate a large portion of the river's bank for the foundation of the plant and dams. It was necessary to build a new dam for the plant and a cofferdam was erected almost diagonally with the old dam, which bore a great weight from the current of the river at this point.

A canal was dug connecting the dam and power house, making much excavating necessary. A reinforced concrete guard wall has been put diagonally across the canal to catch debris that may float down river at flood times, this serving to sheer the flotsam away from the power house. A mechanical raking device has been installed for cleaning the trash racks.

Five turbines, set on vertical shafts, each of 1,500 horsepower, have been arranged for, each driving a 1,500 k.v.a. electric generator. Only four of the five units have been set, these supplying all the needed power at present, the fifth to be held in reserve. Each turbine operates under a head of 20 feet. They are of high speed type, guaranteed to give 90 per cent efficiency, and are set in flumes of the scroll type, built of concrete as is the whole substructure of the power house.

The generators are placed on vertical shafts and two of them have, at the upper end of the shafts, exciters for starting purposes. There are also two motor generators set on the floor for exciting the main generators under ordinary running conditions. The switchboard is on the gallery floor. The main switches are located in a room above the gallery. A storage battery is used in operating the switches when starting and it is from this room that the 23,000 volts development are transmitted across the river to the mill.

The power house is 189 feet in length. Volume of water required to operate is 3,000 cubic feet per second. Only a small force of men is employed to keep the plant going.

In addition to this power plant, the Madison mill has been a good deal improved and considerably extended.

Hardy S. Ferguson of New York designed the plant, which is the latest in hydraulic power equipment. The construction was under the supervision of E. W. Prouty, a Madison engineer. The General Electric Company furnished the electrical equipment and the turbines were built by William Cramp & Sons Ship and Engine Company.

Mills Use University Research Service

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., April 28, 1924.—The popularity of the University of Michigan's Department of Emergency Research among the paper mills of the Kalamazoo valley district is shown by the fact that during the past 60 days this service has been used by Kalamazoo Paper Company, Western Board and Paper Company, Kalamazoo Vegetable Parchment Company, Allied Paper Mills and the Lee Paper Company. Director L. D. White reports that 24 Michigan manufacturing concerns have asked for aid in the past two months.

New York Office
280 Broadway

Dayton Office

Chicago Office
10 So. La Salle St.

Compare it
Tear it
Test it
and you will specify it

HOWARD BOND
WATERMARKED

"The Nation's Business Paper"
Made by

THE HOWARD PAPER CO. URBANA, OHIO

Howard Laid Bond
Howard Ledger
Howard Bond
Envelopes

The B Co. INC.

QUALITY PULPS

HAFSLUND NORWAY — "HAFSLUND BEAR" Bleached Sulphite

F:HAGA — "FORSHAGA" Bleached Sulphite

KRAFT HURUM — "HURUM SPECIAL" Extra Strong Kraft

ORWAY SPECIAL

KOOS BAC — "BAMBLE" Extra Strong Kraft

The Borregaard Company
Incorporated
200 FIFTH AVENUE NEW YORK, N. Y.

KVP

Papers:

Genuine Vegetable Parchment
For wrapping all moist and greasy foodstuffs.

Bread Wraps—Waxed Papers
For tight-sealing cartons and wrapping dry foods.

Bond and Ledger Papers
All standard sizes, weights and colors.

Handy Household Papers in Rolls
Ask and ye shall receive full information.

KALAMAZOO VEGETABLE PARCHMENT CO.
Manufacturers of PARCHMENT, WAXED and BOND PAPERS

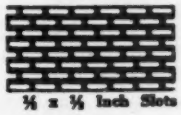
KALAMAZOO, MICHIGAN

Perforated Metal Screens
For Pulp and Paper Mills

STEEL, COPPER, BRASS, BRONZE and other Alloys

punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.

.885 Inch Round



⅛ x ½ Inch Slots

CHARLES MUNDT & SONS
63-65 FAIRMONT AVE. JERSEY CITY, N. J.

STOKERS

Builders of Mechanical Stokers for 35 years

Sales and Service Offices in All Principal Cities

Address Nearest Office

Westinghouse Electric & Mfg. Co.
So. Philadelphia Works, Philadelphia, Pa.

W WESTINGHOUSE ELECTRIC

Westinghouse

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	56	57
Abitibi Power and Paper Company, Ltd, Pfd.	100½	104
American Writing Paper Company, Pfd.	2¼	2½
Brompton Pulp and Paper Company, Ltd.	35	36
Donnacona Paper Company, Ltd.	53	55
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	37	37½
International Paper Company, Pfd.	67	67½
Laurentide Company, Ltd.	87	87½
Price Brothers	40½	41
St. Maurice Paper Co., Ltd.	89	90
Smith (Howard) Paper Mills, Ltd.	52½	53
Spanish River Pulp and Paper Mills, Ltd.	98	98½
Spanish River Pulp and Paper Mills, Pfd.	108¾	109
Union Bag and Paper Corp.	49½	49⅞
Wayagamack Pulp and Paper Company, Ltd.	36	40
West Virginia Pulp and Paper Company	52	54

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	92	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	93	93¾
Brown Company Serial 6s	97	98
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	92	93½
Donnacona Paper Company, Ltd., 1st 6s 1940	98	100
Eddy Paper Company, 1st 7½s 1931	97½	99½
Gair (Robert) Company, 1st 7s 1937	96	96½
International Paper Company, 1st and Ref. 5s (Series "B") 1947	83⅜	83⅝
Mattagami Pulp and Paper Company, 1st 6s 1937	60	63
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	100¾	101¾
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	97	100
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	96¼	97¼
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94½
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	96¾	97½
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	17	20
Riordon Pulp and Paper Company, Ltd., 6s 1942	71½	73
Riordon Company, Ltd., 1st and Ref. 8s 1940	67	69
River Raisin Paper Company, 1st 8s 1936	103½	104½
Smith (Howard) Paper Mills, Ltd., 6s 1934	99¾	101
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	92	96
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	99	100
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102¾	103¼
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill	
Ledgers 11.00	@38.00
Bonds 9.00	@45.00
Writings—	
Extra Superfine.. 14.00	@30.00
Superfine 14.00	@30.00
Tub Sized 10.00	@15.00
Engine Sized 8.00	@11.00
News—f. o. b. Mill—	
Rolls, contract .. 3.75	@ 4.00
Rolls, transit..... 3.75	@ 4.25
Sheets 4.25	@ 4.50
Side Runs 3.50	@ 4.15
Book, Cased—f. o. b. Mill—	
S. & S. C..... 7.25	@ 9.00
M. F. 7.10	@ 8.85
Coated and Enamel 9.00	@14.00
Lithograph 9.00	@14.00
Tissues—f. o. b. Mill—	
White No. 1 .... .75	@ .76
White No. 2 .... .70	@ .80
Colored 1.05	@ 1.90
Anti-Tarnish 1.35	@ 1.90
Kraft ..... .85	@ 1.10
Manila ..... .75	@ .80
Kraft—f. o. b. Mill—	
No. 1 Domestic.. 5.75	@ 6.25
No. 2 Domestic.. 5.15	@ 5.75
Imported 4.75	@ 5.20
Manila—	
No. 1 Jute 7.50	@ 9.00
No. 2 Jute 7.75	@ 8.50
No. 1 Wood.... 4.75	@ 5.25
No. 2 Wood.... 4.00	@ 4.50
Butchers 4.00	@ 4.50
Fibre Papers—	
No. 1 Fibre 5.50	@ 5.75
No. 2 Fibre 5.00	@ 5.25
Common Bogus.. 3.50	@ —
S. Screening 3.25	@ 3.75
Card Middles 4.00	@ 5.00

Boards—per ton—	
News 55.00	@60.00
Straw 61.00	@63.00
Chip 38.00	@45.00
Binders' Boards..70.00	@75.00
Sgl. Mls. Ll. Chip 65.00	@75.00
Wood Pulp 70.00	@75.00
Container 70.00	@80.00
Sulphate Screenings—	
Coarse ..... .80	@ .90
Refined 1.75	@ 2.00
Ground Wood—	
Screenings 20.00	@25.00
Glassine—	
Bleached, basis 25 lbs. 12.00	@15.00
Bleached, basis 20 lbs. 14.00	@17.00

Mechanical Pulp

(Ex-Dock)	
No. 1 Imported....35.00	@36.00
(F. o. b. Mill)	
No. 1 Domestic....29.00	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached 3.75	@	4.50
Easy Bleaching.. 2.75	@	3.00
No. 1 strong unbleached 2.60	@	2.75
No. 2 strong unbleached 2.20	@	2.40
No. 1 Kraft..... 2.50	@	3.00
Sulphate—		
Bleached 3.40	@	3.80
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached 3.75	@	4.25
Easy Bleaching Sulphite 2.50	@	2.90
News Sulphite..... 2.40	@	2.60
Mitscherlich 2.30	@	2.90
Kraft (Domestic).. 2.40	@	2.75
Soda Bleached..... 3.90	@	4.10

Domestic Rags

New Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—	
New White, No. 1 13.00	@13.50
New White, No. 2 6.25	@ 6.75
Silesias, No. 1... 7.50	@ 8.00
New Unbleached. 10.50	@11.00
Washables 5.50	@ 6.15
Fancy 6.50	@ 7.00
Blue Overall.... 8.00	@ 8.50
New Blue..... 5.50	@ 6.00
New Black Soft. 4.65	@ 5.15
New Light Seconds 3.00	@ 3.25
O. D. Khaki Cuttings 4.75	@ 5.00
Men's Corduroy.. 4.00	@ 4.25
New Canvas.... 7.00	@ 7.50
New Black Mixed 2.75	@ 3.00
White, No. 1—	
Repacked 6.50	@ 7.00
Miscellaneous ... 5.50	@ 5.75
White, No. 2—	
Repacked 4.25	@ 4.50
Miscellaneous ... 3.75	@ 4.00
St. Soiled, White 2.80	@ 3.00
Thirds and Blues—	
Repacked 3.75	@ 4.00
Miscellaneous ... 3.00	@ 3.25
Black Stockings.... 3.75	@ 4.00
Roofing Rags—	
Cloth Strippings.. 2.20	@ 2.30
No. 1..... 2.20	@ 2.30
No. 2..... 2.10	@ 2.20
No. 3..... 1.20	@ 1.30
No. 4..... 1.20	@ 1.30
No. 5A..... 1.70	@ 1.80

Foreign Rags

New Light Silesias. 7.50	@ 8.75
Light Flannelettes.. 8.00	@ 8.25
Unbl'chd Cottons... 9.00	@ 9.50
New White Cuttings 11.50	@12.50
New Light Oxfords 7.75	@ 8.25
New Light Prints.. 7.25	@ 7.75
New Mixed Cuttings 3.25	@ 3.75
New Dark Cuttings. 3.00	@ 3.50
No. 1 White Linens 9.00	@10.00
No. 2 White Linens 7.00	@ 8.00
No. 3 White Linens 6.00	@ 6.50
No. 4 White Linens 4.50	@ 5.50
Old Extra Light Prints 4.00	@ 4.50
Ord. Light Prints.. 3.00	@ 3.50
Med. Light Prints.. 2.40	@ 2.50
Dutch Blue Cottons. 3.00	@ 4.00
Ger. Blue Cottons.. 3.00	@ 3.25
Ger. Blue Linens.. 3.50	@ 4.00
Checks and Blues.. 2.25	@ 2.50
Dark Cottons..... 2.00	@ 2.10
Shoppery 1.75	@ 1.85
French Blues..... 3.25	@ 3.75

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—	
Foreign 1.50	@ 1.60
Domestic 1.50	@ 1.60
Wool, Tares, light.. 1.40	@ 1.50
Wool, Tares, heavy 1.40	@ 1.50
Bright Bagging.... 1.10	@ 1.20
Sound Bagging ... .90	@ 1.00
Manila Rope—	
Foreign 6.25	@ 6.50
Domestic 6.50	@ 6.75
New Bu. Cut..... 2.25	@ 2.50
Hessian Jute Threads—	
Foreign 2.25	@ 2.50
Domestic 2.00	@ 2.10

Twines

Cotton—(F. o. b. Mill)—	
No. 1 ..... .30	@ .38
No. 2 ..... .29	@ .31
No. 3 ..... .34	@ .36
India, No. 6 basis—	
Light ..... .17	@ .18
Dark ..... .16	@ .17
B. C., 18 basis.... .41	@ .42
A. B. Italian, 18 Basis ..... .51	@ .61
Finished Jute—	
Dark, 18 basis.. .29	@ .30
Light, 18 basis.. .26	@ .27
Jute Wrapping, 3-6 Ply—	
No. 1 ..... .20	@ .23
No. 2 ..... .18	@ .20
Tube Rope—	
4-ply and larger. .15	@ .17
Fine Tube Yarn—	
5-ply and larger.. .19	@ .21
4-ply ..... .20	@ .22
3-ply ..... .20	@ .22
Unfinished India—	
Basis ..... .16	@ .17
Paper Makers' Twine Balls ..... .09	@ .11
Box Twine, 2-3 ply .14	@ .15
Jute Rope ..... .15	@ .16
Amer. Hemp, 6..... .30	@ .32
Sisal Hay Rope—	
No. 1 Basis.... .14	@ .16
No. 2 Basis..... .10	@ .12
Sisal Lath Yarn—	
No. 1 ..... .14	@ .15
No. 2 ..... .11	@ .13
Manila Rope ..... .18	@ .19

Old Waste Papers

(F. o. b. New York)

Shavings—	
Hard, White, No. 1 3.75	@ 4.00
Hard, White, No. 2 3.10	@ 3.30
Soft, White, No. 1 2.90	@ 3.15
Flat Stock—	
Stitches 1.45	@ 1.50
Over Issue Mag. 1.45	@ 1.55
Solid Flat Book.. 1.30	@ 1.40
Crumbled No. 1.. 1.10	@ 1.20
Solid Book Ledger. 2.00	@ 2.10
Ledger Stock..... 1.60	@ 1.70
New B. B. Chips. 65,	@ .80
Manilas—	
New Env. Cut... 2.45	@ 2.55
New Cut. No. 1.. 1.75	@ 2.00
Extra No. 1 old. 1.30	@ 1.40
Print ..... .95	@ 1.05
Container Board.. .90	@ 1.00
Bogus Wrapper.. .80	@ .85
Old Krafts Machine compressed bales. 1.95	@ 2.05
News—	
No. 1 White News 1.80	@ 1.90
Strictly Overissue .90	@ 1.00
Strictly Folded... .70	@ .80
No. 1 Mixed Paper. .55	@ .65
Common Paper.... 45.	@ .55

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill		
All Rag Bond.....	35 @	40
No. 1 Rag Bond..	30 @	35
No. 2 Rag Bond..	14 @	25
Water Marked Sulphite	9 @	12
Sulphite Bond	7½@	10¾
Sulphite Ledger ...	9½@	12
Superfine Writing..	18 @	24
No. 1 Fine Writing	14 @	18
No. 2 Fine Writing	12 @	14
No. 3 Fine Writing	9 @	12
No. 1 M. F. Book	5¾@	7¼
No. 1 S. & S. C. Book	6¼@	7¾
Coated Book	8 @	10
Coated Label	8 @	10
News—Rolls, mill—	3¼@	4½
News—Sheets, mill	4 @	4¼
No. 1 Manila.....	4¼@	5
No. 1 Fibre.....	4¼@	5
No. 2 Manila.....	4½@	4¾
Butchers' Manila...	4¼@	4½
No. 1 Kraft.....	6 @	6½
No. 2 Kraft.....	5½@	6
Wood Tag Boards.	4½@	6
Screenings	2¾@	—
Boards, per ton—		
Plain Chip $40.00	@42.50	
Solid news 42.50	@45.00	
Manila Line Chip. 50.00	@52.50	
Container Lined—		
85 Test 60.00	@65.00	
100 Test 65.00	@70.00	

Old Papers

F. o. b. Chicago

Shavings—	
No. 1 Hard White 3.25	@ 3.35
White Envel. Cuttings 3.25	@ 3.35
No. 1 Soft Shav. 2.50	@ 2.60
No. 1 Mixed..... 1.25	@ 1.35
No. 2 Mixed 1.15	@ 1.25
Ledgers and Writings 1.60	@ 1.70
Solid Books 1.50	@ 1.55
No. 1 Books, Light 1.25	@ 1.30

Blanks	2.20	@	2.25
Ex. No. 1 Manila	2.30	@	2.40
Manila Envelope Cuttings	2.45	@	2.50
No. 1 Manilas	1.10	@	1.15
Folded News (over issue)	1.10	@	1.15
Old Newspapers—			
No. 1	.85	@	.90
No. 2	.80	@	.85
Mixed Papers—			
No. 1	.80	@	.85
No. 2	.70	@	.75
Straw Clippings	.90	@	1.00
Binders' Clippings	.90	@	1.00
Kraft	2.20	@	2.30
New Kraft Cuts	2.50	@	—
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$38.00	@	—
No. 2	36.00	@	—
No. 3	34.00	@	—
No. 4	34.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¾	@	.12¼
Book, S. S. & C.	.11	@	.15
Book, Coated	.14¼	@	.20
Coated Lithograph.	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	45.00
Chip Board	40.00	@	45.00
Wood Pulp Board. (Carload Lots)	2.75	@	3.00
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply.	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.45	@	—
Domestic	1.50	@	—
Manila Rope	6.00	@	6.50
Sisal Rope	1.25	@	—
Mixed Rope	1.30	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.30	@	—
No. 1, New Lt. Burlap	2.00	@	—
New Burlap Cuttings	2.00	@	2.25

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.00	@	4.10
No. 2, Hard White	3.25	@	3.50
No. 1 Soft White	3.00	@	3.10
No. 2 Soft White	1.75	@	2.00
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock.	2.00	@	2.25
Writing Paper	2.00	@	—
No. 1 Books, heavy	1.80	@	1.90
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.20	@	1.25
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.75	@	.80
No. 1 Mixed Paper.	.70	@	.75
Common Paper	.50	@	.60
Straw Board, Chip.	.75	@	.80
Binders Bd., Chip	.75	@	.80

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13	@	—
New White, No. 2	.07	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached.	.11	@	.11½
Washable	.05	@	.05½
Fancy	.06½	@	.06¾
Cottons—according to grades—			
Blue Overall	.08¾	@	.09
New Blue	.03¾	@	.04
New Black Soft.	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11
New Black Mixed	.05¼	@	.05½
Old			
White, No. 1—			
Repacked	3.75	@	3.75
Miscellaneous	.05½	@	.05¾
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04¾	@	—
Thirds and Blues—			
Repacked	3.75	@	—
Miscellaneous	3.25	@	—
Black Stockings	4.25	@	4.75
Roofing Stock—			
No. 1	2.35	@	2.45
No. 2	2.15	@	2.25
No. 3	2.05	@	2.15
No. 4	2.05	@	2.15
No. 5A	1.75	@	—
B			nominal
C			nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08½	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.00	@	4.50
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	42.50	@	45.00
News, Vat Lined	44.00	@	46.50
Wood, Vat Lined		@	52.50
Filled News Board	45.00	@	47.50
Solid News Board, No. 4 Finish	60.00	@	—
S. Manila Chip	60.00	@	65.00
Pat. Coated News	77.50	@	87.50

Old Papers

Mixed paper	.60	@	.65
Folded news	.70	@	.75
Soft white shavings	2.65	@	2.70
Hard white shav'gs	3.50	@	3.75
Kraft paper	1.90	@	2.05
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.45	@	1.62½
Manila paper No. 1	1.70	@	1.75
Solid ledgers	2.50	@	2.75
No. 1 roofing rags.	1.85	@	1.90
No. 2 roofing rags.	1.80	@	1.85
No. 3 gunny bagging	.75	@	.85
No. 4 Brussels and hard back carpets	1.65	@	1.75
No. 5 roofing rags:			
A's	1.00	@	1.15
B's		@	
C's		@	
No. 6 City dump rags		@	
Manila rope, domestic	.06	@	.06½
Mixed strings	1.20	@	1.40
Jute strings	1.40	@	1.60

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$34.00	@	36.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	52.50	@	55.00
Sulphite, bleached.	75.00	@	80.00
Sulphite	60.00	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.80	@	—
Soft White Book shavings	3.00	@	—
White Blk. News	1.90	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.35	@	—
Light and Crumpled Book Stock	1.20	@	—
Ledgers and Writings	1.68	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut.	—	@	1.80
Printed Manilas	1.25	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	—	@	65
Domestic Rags—			
Price to mills, f. o. b. Toronto			Per lb.
No. 1 White shirt cuttings	.12¾	@	.13
No. 2 White shirt cuttings	.06½	@	.07
Fancy shirt cuttings	.06¼	@	.06½
No. 1 Old Whites		@	
Third and blues	.04	@	.04½
			Per cwt.
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06½	@	.06¾
No. 2	1.55	@	—

Two Booklets on Belting

The Chicago Belting Company has issued two exceedingly valuable booklets. One of these is entitled "Instructions for Making Leather Belts Endless" which is filled with practical information for the man in the shop who has charge of the belts. The following of the ideas suggested in this little booklet will save any shop which uses leather belting a great deal of money. The other booklet is on "Pre-tested Leather Belting." The pre-testing idea is revolutionizing the buying and selling of leather belting. The book tells just what pre-tested leather belting is and much about its use. The Chicago Belting Company which is located at 113 North Green street, Chicago, is having many requests for these booklets from the heads of large companies throughout the country.

Beaver Board Co. Makes Good Report

The first annual report of the Beaver Board Company, representing the combined Beaver Board companies and Beaver Products Company, shows for 1923 gross sales of $15,050,722, against $12,783,798 in 1922, before the consolidation. Net profits received by the Beaver Board Company last year were $438,898, against which were general expenses amounting to $47,061 and interest of $370,504 on the outstanding 8 per cent notes, leaving a net of $21,222 as the final profit of the parent company.

First quarter sales this year also show a gain over the corresponding period of last year.

Lenix Drive Bulletin

An interesting piece of literature distributed at the paper show last week was the bulletin on "The Lenix Drive in The Paper Industry" which is issued by F. L. Smidth & Co., engineers. The bulletin publishes a long list of representative concerns which are satisfied users of the Lenix drive and then goes into a description of the belt drive, the horizontal and vertical drives for beaters, etc. The bulletin is well illustrated, showing the important principles of the drive.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, APRIL 30, 1924.

The market again this week is holding consistently to its unchanging tendencies of the past few weeks. There have been but few changes in prices and such as have occurred have been slight and have had little significance. At the present moment there is no greater indication of any immediate change of a radical nature than there has been for a month past.

Trading continues to be ruled by such buying as is demanded by immediate needs and until this inclination to cautious buying wears away no sweeping change in the market can be looked for. There are no new influences at work in the market and no new disturbing factors have arisen to create complications. "Fair" is perhaps the best possible word by which to characterize the entire situation.

Dealers and manufacturers are nevertheless somewhat nonplussed that the better business which has for so long a time been considered momentarily inevitable has not yet arrived but they still persist in their faith and believe that sweeping price revisions and greatly increased demand may come at any moment and, perhaps, without preliminary warning. Most lines, however, are holding their own and any change promises to be for the better.

News print which has proved the gilt-edge standby is still in the lead as a market feature. There is no material change in price and, while the demand fell off a trifle during the Easter holidays, it is still brisk and highly satisfactory. The price holds firm and the market's general tone is excellent.

Fine papers keep on meeting a fair demand and the price holds strong. Impetus is looked for soon but dealers express themselves as highly satisfied with conditions when business in some other lines are taken in comparison.

Board has been subjected to no change. The demand continues fair and the manufacturers believe they can detect an inclination to almost immediate betterment.

The closing days of the month have showed a tendency to more activity in tissues and a pronounced improvement in this line is anticipated during early May. Improvement is noted in coarse papers and wrapping and the demand for these grades is developing a healthy increase.

Mechanical Pulp

There has been no essential change in mechanical pulp. The demand is good and the mills are well supplied with business. The healthy condition in mechanical pulp can be accounted for by the lively demand for news print and the two continue to move along hand in hand.

Chemical Pulp

Chemical pulp is moving slowly and is about as it has been for the past two weeks. A more or less steady demand is coming from the mills but low prices are being eagerly sought and there is no effort to purchase beyond the needs of the hour. Foreign pulp has a large call and is influencing the price on domestic pulp.

Old Rope and Bagging

There is still a fair demand for old rope and the only change in prices noted is where dealers have made slight reductions in order to make a quick disposal of surplus stock. Bagging demand is not what it should be but there is a fair call for it.

Rags

The week developed a good demand for rags. The price on foreign rags continues high, this probably being due in the main to the current rumors that there is a scarcity of stock abroad. These facts should tend to stabilize the domestic market as there is enough current business here to keep the domestic supply moving steadily to the mills. Conditions in this department are generally satisfactory to the dealers.

Waste Paper

The better grades of waste paper are fairly firm but the demand for the lower grades is more or less spotty. At the present writing the demand is just about sufficient to take care of the supply so that there is no great accumulation of stock anywhere nor is there likely to be for some time to come. The market here may be summarized as just ordinary with a demand just about sufficient to keep the stock moving.

R. H. Laftman Heads Southern Superintendents

[FROM OUR REGULAR CORRESPONDENT.]

NEW ORLEANS, LA., April 28, 1924.—Richard H. Laftman, assistant general manager of the Bogalusa Paper Company was elected chairman last week of the organization of the Dixie division of the American Pulp and Paper Mill Superintendents Association. The new division takes in Louisiana, Mississippi, Georgia, Florida, North and South Carolina, Texas, Tennessee, Virginia, West Virginia and the southern sections of Kansas and Missouri. The other officers elected were:

Max Zimmerman, general manager of the Charles Boldt Paper Mills Company of New Iberia, first vice-chairman; J. F. Carter, secretary of the Calcasieu Paper Company of Elizabeth, second vice-chairman; R. E. Hartman, general manager of the E-Z Opener Bag Company of Braithwaite, third vice-chairman; Isaac Witham, superintendent of the Bogalusa Paper Company, Inc., secretary-treasurer.

Organization and membership committee: E. H. Mayo, general manager of the Southern Paper Company at Moss Point, Miss.; C. C. Muench, general manager of the Celotex Company at Marrero, La.; William M. Cary, superintendent of the E-Z Opener Bag Company at Braithwaite, La.; H. G. Jones, superintendent of the Pynetree Paper Company of Gordon, Ga.; and O. J. Olson, superintendent of the Bastrop Pulp and Paper Company of Bastrop, La.

Program and meeting committee; Hunter Beaty, manager of the Yellow Pine Paper Mill Company at Orange, Texas; Moran Parsons, superintendent of the Celotex Company at Marrero, La.; Arthur Zimmerman, superintendent of the Bogalusa Paper Company, and Peter Nadeau, superintendent of the Southern Paper Company at Moss Point, Miss. The executive committee consists of divisional officers and the chairman of the organization and program committees.

Paper Directory of United Kingdom

The forty-eighth annual edition of the Directory of Paper Makers of the United Kingdom has been issued by Marchant Singer & Co., 47 St. Mary Axe, London, England. The directory contains a complete fund of information for those who will desire it. Included in the contents is a list of paper enamellers, surfacers, gummers, etc., paper makers' representatives and agents, London wholesale stationers, list of mills, classification of makes, trade designations, paper trade customs, sizes of papers, paper trade publications, addresses of firms, etc. The price of the book is five shillings or by post, 5s., 6d.

Monroe to Have Bag Plant

[FROM OUR REGULAR CORRESPONDENT]

MOBILE, La., April 28, 1924.—Work is to start immediately on a paper bag factory in West Monroe which will specialize in the manufacture of paper sacks used in packing and shipping carbon black. The new industry is to be financed by Ochiltree Bancroft of Orange, Texas The site purchased is located on the spur track leading to the Brown Paper Mill. The Brown Mill will supply the paper for the manufacture of the bags. The factory will be built on the unit plan and will start with a small organization. The first unit will represent an investment of $25,000 and about 30 persons will be employed.

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Kronstädter Papierstoff — Fabriks Action — Gesellschaft
Mills at Tuciansky, Sv. Martin

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, April 30, 1924.

The past week has experienced little change in the chemical market, either in prices or in demand. The same disposition to buy only in sufficient quantities for immediate use continues to prevail. Large users of chemicals who would ordinarily be placing large orders at this time are cautiously approaching the market with orders closely curtailed to the needs of the moment. Buying on a more generous scale with a tendency to a rise in prices is the logical condition looked for within the near future.

BLEACHING POWDER.—There has been no further rise in bleach since that reported earlier in the month. The demand is steady and a satisfactory amount of business is being done in this commodity. The quotation at this writing is from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic, which for some time has remained without change, still preserves the same equilibrium and there is no immediate indication of any change. The open market demand is fair but not quite what the dealers feel it should be. The price still stands at 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—Casein is today characterized by a steadiness quite in contrast to its erratic behavior during the past few months. The price quoted for some time past still holds. It is from 11 to 12 cents a pound.

CHINA CLAY—A fair amount of orders for China clay have passed through the market during the past week but competition among the edalers in this community is said to be exceedingly keen at this time. Buying is expected to gather strength at almost any moment and the rather dull condition is looked upon as merely temporary. The imported grades are selling from $16 to $20 a ton and the domestic grades are bringing from $12 to $15 a ton.

CHLORINE—While the demand for chlorine has remained strong in the local markets, the past week has witnessed no increase in price. The present quotation is 4.50 to 5.00 cents a pound in tanks.

ROSIN—Rosin has apparently reached its low point and the drop in price recently has evidently been checked. There was no further drop during the past week and it is likely that the next change will be upward rather than downward. The quotation at this writing is from $5.75 to $5.85 in 280 pound barrels.

SALTCAKE—The saltcake market has not been susceptible to any change. The demand is not just what it should be but the orders come with regularity and are consistent with the general tendency of buying "just for today." The price still hangs at from $20 to $23 a ton.

SODA ASH—A fair demand for soda ash is also felt but here again conditions are not entirely satisfactory and a quick improvement is anticipated. The price is remaining stationary at 1.38 a pound on a flat basis.

SULPHATE OF ALUMINA—Alumina underwent a slight upward tendency in price during the past week which gave it distinction in the chemical market. The change is confined to the price for iron free. The change is in reality but a recovery from the slight falling off in price this commodity passed through a few weeks ago. There is a good demand. The commercial grade is quoted at from 1.15 to 1.30 cents while iron free is bringing from 2.15 to 2.40 cents a pound.

SULPHUR—There is a steady demand for sulphur but the same cautious buying which pervades the whole market also applies to this commodity. The price is from $16 to $17 a ton.

The Knox & Wolcott Paper Company, whose offices and warehouse had been located at 626 Federal street, Chicago, went into the hands of a receiver a few days ago. Edwin D. Buell, of 105 W. Monroe street, was appointed receiver by the court.

Trade-Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

PASTEL—No. 176,848. McLaurin Jones Company, Brookfield, Mass. For coated paper.

1869—No. 178,352. Schwabacher Brothers Company, Inc., Seattle, Wash. For toilet paper.

MADRONA—No. 187,351. Schwabacher Brothers Company, Inc., Seattle, Wash. For paper and paper products.

C. D. L.—No. 188,037. T. B. Little Company, Ltd., Montreal, Quebec, Canada. For coated paper.

RADIO CHEK—No. 188,439. Louis J. Rouleau, Boston, Mass. For correspondence cards.

TESTATE T B—No. 191,047. The Webb Lithograph Company, Cleveland, Ohio. For paper used in correspondence and business stationery.

CLOVER—No. 192,351. The Alling & Cory Company, Pittsburgh, Pa. For sulphite bond writing paper.

FLEXO—No. 192,804. Universal Crepe and Tissue Mills, Inc., New York. For toilet paper.

SUN MAID—No. 193,128. San Joaquin Grocery Company, Fresno, Cal. For kraft paper.

ROMANCE—No. 193,483. The Whitaker Paper Company, Baltimore, Md. For cover paper, book, printing and writing paper.

ROBIN HOOD—No. 193,707. Hampshire Paper Company, South Hadley Falls, Mass. For announcement, business stationery, social stationery and mailing envelopes.

INTERTWINED LETTERS S A V—No. 175,541. Camille H. Boulin, New York City. For Hand-made paper.

DRYTYPE—No. 180,070. Wilhelm Koreska, Vienna, Austria. For stencil sheets and copying paper for pencil, ink and typewriter.

PACIFIC—No. 185,933. Noiseless Typewriter Distributing Company, San Francisco, Calif. For carbon papers.

MURALIEF—No. 190,942. Star-Peerless Wall Paper Company. Mills, Joliet, Ill. For wall papers and paper borders for walls.

PAPERUS—No. 173,867. The U. S. Paper Goods Company, Cincinnati, Ohio. For writing paper and envelopes.

PENROSE—No. 186,333. L. A. Schwagerl & Co., Inc., New York. For writing paper, paper clips, pins and blank notebooks.

Takes Over Plant Under Long Lease

CONSTANTINE, Mich., April 29, 1924.—The American Can Company of New York City, which since 1916 has contracted for the entire output of the Constantine Board and Paper Company of this place, has taken over the operating of the plant under a long term lease. The new arrangement went into effect on April 1. It is stated that there will be no change in personnel at the plant and that the new arrangement will not be attended by any radical change in plant operation.

Tc Build Hydro Electric Plant at Whiting Mills

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., April 29, 1924.—The Holyoke Water Power Company has awarded the contracts for the completion of the Hydro-electric plant by the Whiting No. 1 paper mill to D. McCormick & Sons. The plans have been changed somewhat owing to the decision to establish a distributing station as well as generating plant at this place and thus save much wiring. The building exclusive of machinery will cost about $30,000 and is expected to be in full operation by July 1.